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# A JOURNAL DEVOTED TO BEES, AND HONEY, AND HOME INTERESTS. ILLUSTRATED SEMI-MONTHLY Published by THE A. I. ROOT CO. \$1.00 PER YEAR MEDINA, OHIO.

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I'M DELIGHTED to see by the footnotes that A. I. Root is getting interested again in bee-keeping.

THE *American Bee Keeper* now wears footnotes, and Editor Hill seems to be a good footnoter.

E. F. ROBINSON says in *Canadian Bee Journal* that he weighed a lot of natural-wax scales on jeweler's diamond-scales, and found 192 to the grain. That makes 1,344,000 to the pound.

EDITOR YORK is determined the young Methodists shall not grow up in ignorance as to bees. The *Epworth Herald* contains two instructive articles from his pen. [Good for York!—ED.]

IT SEEMS STRANGE that C. H. W. Weber, the man who is in the front rank in bottling honey that never granulates, should be a successor to C. F. Muth, the man who did more than any one else to popularize granulated honey.

THE DZIERZON THEORY "is the cornerstone and solid rock upon which nearly all we know about bees is based." I am glad A. I. Root had to read proof, so as to make him say that on page 531. Every bee-keeper who is not yet familiar with the Dzierzon theory should make it his first business to get it.

EASTERN BEES may not do exactly as Texas and Arizona bees are said to do on page 523; but still it is well known that they are much less inclined to swarm when a full yield is on than when there is a moderate flow. [But did you ever know them, when the honey-flow begins, to kill off the drones and destroy cells?—ED.]

A NOTION lingers with me that, before the year is out, the editor will discover that hot water is ahead of steam for wax-presses. Germans who are familiar with both put hot water in the lead, and Rambler seems to be of the same way of thinking, page 513. Now, Rambler, tell us all you know about it. [I

may change my mind, perhaps. But I don't see how the hot-water device is going to be as simple and clean.—ED.]

FRIEND A. I. ROOT, when you solve the puzzle why government can't give us bulletins about beer as well as beans, here's another for you to tackle: Why is it that, if more liquor is drunk since the abolishment of the canteen, the men who manufacture the liquor are the ones most anxious for the re-establishment of the canteen?

AFTER a queen has distinguished herself for three successive seasons as the best in your apiary, you are anxious to have her live longer so as to breed from her. Don't shorten her life by profuse laying in a strong colony, but keep her in a nucleus. [That is just what we are doing with our best breeder, and did do last season. The advice is sound.—ED.]

DAVITTE says the important thing in his big tent is to tame the drones. The problem now is to find the smallest tent in which drones can be trained to fly at ease. Possibly it may be yet brought within the reach of every bee-keeper. [When I get home I expect to try a small tent, then a larger one later. I can't get away from the belief that a small tent would fill the bill.—ED.]

IS IT TRUE that, when bees are deprived of a queen, they of choice select for the rearing of queens larvæ that are three days old or older? Any one ought to be able to settle the question for himself. All you need to do is to look at the cells first started and see the size of the grub. I have yet to see a case where the first larva selected was three days old if younger were present.

AFTER REFLECTION I am not prepared to admit that "scientific queen-rearing" is a misnomer, and I think there's very little science in most of the queen-rearing that's done, page 545. The man who rears queens with no attention to the stock from which his queens are reared, and no regard to the drones used, is not doing a scientific job, even if he uses up-to-date methods, Doolittle cups and all.

W. W. SOMERFORD thinks the flat cover perfect, p. 553. That may be due to the "peculiar conditions in Cuba." In Illinois it will



warp, and, worse yet, it will twist. No doubt he is right that the  $\frac{3}{4}$  cover will warp less than the  $\frac{1}{4}$ . His top ventilation (pulling back the cover to rest on cleat) would be too much in Illinois. The flat cover is warm with a cloth under it; but wouldn't it be still warmer with a dead-air space and a cloth?

AND NOW the geographical center of the honey-yield shifts to Arkansas, where L. E. Kerr lives. He tells in the *Amer. Bee-Keeper* that, in his locality, all a wide-awake bee-keeper has to do in the seven months of slow, steady flow, is to care for swarms in April and May, keep good queens, and let the bees alone, and he will average 100 to 300 lbs. of first-class comb honey. [I could and will tell of some other geographical centers a little later.—ED.]

"IF YOU WOULD see the influence of a queen on her bees, take the mildest colony that you have, and also the most irritable, and exchange their queens, and note the effect 36 hours after the queens are liberated," says D. B. Norton in *American Bee Keeper*. I never watched so closely as that; but when I've killed a queen because her bees were savage, I have been puzzled to find a marked change before there could be much change in the bees. [Similar statements have been made before, and I believe there is something in it; and yet—and yet—it seems hardly possible that a queen could exert so great an influence in so short a time.—ED.]

SCIENTIFIC queen-rearing requires careful selection of sire and dam, adapting one to the other. Little can be done at that till fecundation can be controlled. In the mean time, if every bee-keeper persistently breeds from queens whose colonies store biggest crops, I'm sure he will bring up his average. [Yes, that is true. J. F. McIntyre, of California, has a row of hives in his apiary, each of which has a queen from his best breeder. He says it was easy to see that this row of hives gives a larger yield than any other row of an equal number and strength. By the by, in my travels I have run across a number of bee-keepers who have daughters from this McIntyre queen, and they all say they are something extra. Their colonies surpass in honey the other colonies in the yard. If McIntyre gets a free advertisement out of this he is welcome to it.—ED.]

LONGEVITY in bees is coming to the front. Assuming that in harvest time a worker lives six weeks, and goes afield when 16 days old, if its life were prolonged a week it could store 27 per cent more. If one queen lives twice as long as another, will not her workers live at least a little longer? Is it not possible that, by proper selection continuously exercised, we might add that week to the life of the worker? If we could add a sixth to its summer life, that ought to add a sixth to its winter life. In that case a bee born Oct. 1, which now lives till Apr. 1, would live till May 1—quite a help in the wintering problem. Another thing: We can tell better what a queen is by two or three seasons' work than we can by a single season's work. The one that shows herself

best for three seasons is a safe one to breed from. I have queens born in 1897 that are among the best—one of them, I think, the very best I have. [While this is true, the average queen, I think, had better be displaced in two years by a young one.—ED.]

G. M. DOOLITTLE does some figuring in the *American Bee Journal*, that seems to have no flaws in it, by which he shows that a queen in the hands of a queen-breeder may be worth \$3750. That seems an astounding value, but it's hard to get away from it if we admit his data: A queen whose bees store 10 lbs. more than the common, one-fourth of whose queen progeny will equal the mother, which will live three years, or long enough for the breeder to rear from her 4000 queens. The important thing, connected to a certain extent with this, that I'd like to ding into the ears of every bee-keeper, is that, if he will take the pains to keep a record of the performance of his bees, and then breed only from the queen whose bees have done the best storing, he would be materially adding to his income. [Doolittle is not far wrong. See my answer concerning the McIntyre queen, in the preceding column.—ED.]



Summer's blossoms everywhere,  
Sweetest perfumes fill the air;  
Bees are busy all the day  
Buzzing their melodious lay.



Dr. Miller says in a private letter: "Unless rain comes soon every thing will be dried up." Quite the opposite in this region of country. The amount of rain fallen between May 25 and July 5 has almost if not entirely broken the record, while the heat has touched the 100 point.



A Cleveland daily of July 4 speaks of what it calls a very odd consignment of goods from Italy—"a queen-bee, a large bee designed as the nucleus of an apiary." Is it possible that such a thing should create surprise in a city whose smoke can be seen from the Home of the Honey-bees? A constant stream of such bees has been flowing from Italy to America for years, and they have been sent even to Australia and other remote countries.



The indications are that bee culture is taking great strides now in Italy, in common with many other lines of industry. The papers tell us that Italy has just passed France in point of population, and will soon regain much of its lost prestige among the great nations. Conservatism among bee-keepers is fast giving way to the search-light of actual test. As Italy has done so much in the way of giving to the world its best bees, we can

not help feeling a deep interest in the welfare of that land of song. Its chief and almost only bee-journal is *L'Apicoltore*, published at Milan. It is, to a great extent, an able summing-up of bee culture in Europe and other countries.



#### AMERICAN BEE JOURNAL.

In his issue for June 27 Mr. York seems to have gotten up a little surprise party for the benefit of Dr. C. C. Miller. The doctor's picture appears on the first page, accompanied by some lines supposed to represent the retrospective views of a man who has just passed 70 years of life, as the doctor did on the 10th of June. Mr. York speaks of Dr. Miller as "the most prolific writer on bee culture to-day." This is probably true, although G. M. Doolittle certainly gives him a close second. It is very gratifying to have the doctor tell us of his good health and of the amount of work he is still able to do personally. He calls himself "seventy years young," and that is certainly a good way to put it.



#### AUSTRALIAN BEE-KEEPERS' REVIEW.

The first issue of this journal has just arrived, and is simply an index of the rapid advance in bee culture now being made in Australia. It has 16 pages, very plain print. What strikes me as the star article was written by Mr. J. E. Crane, of Middlebury, Vt. It is in regard to what might almost be called a good hobby with Mr. Crane—the improvement of bees themselves rather than spending so much time with hives and appliances. He says:

"It is not certain that the great mass of bees to-day are any better for honey-gathering than in the days of Virgil and Aristotle. So busy, indeed, have bee-keepers been during this nineteenth century inventing hives, boxes, sections, supers, foundation, smokers, extractors, with systems of management, manipulation, and a thousand and one other things connected with bee-keeping, that they seem to have almost forgotten the possibilities of improving the bees themselves."

It seems, however, as if the matter of improved bees had not been entirely neglected in these columns.



The printer, not being familiar with the word "Carniolans," has disguised it under the new spelling of "Carrinolaus."



#### L'APICULTURE PRATIQUE.

This journal, published at the old home of Charles Dadant, in France, makes the following parallel between the honey display in Paris last year and that at Buffalo this year:

The exposition of 1900 was the admiration of the whole world. That is an understood thing; but was it really practical? We are in a position to doubt it from our point of view. Apiculture was represented there, it is true, but with what parsimony was space allotted to it! Under such circumstances, what was the impression visitors received of our industry? Thorough contempt, probably.

The Americans, on the other hand, understanding the importance of a well-arranged exhibit, have not hesitated to make the greatest sacrifices for the Pan-American.

A special building has been decided on, where will be exhibited all the implements used in apiculture, as well as their products. But the most interesting point is that all systems of hives will be exhibited

filled with bees, which, by an ingenious arrangement, will be able to communicate with the outside while doing their work, while visitors will be able to examine the interior of the hives through observation glasses. It will be tried in every way to demonstrate the part bees play in the fertilization of blossoms. An exhibition of this kind will certainly make a great impression on the public, who frequently are ignorant of the elementary principles of apiculture.

The above is designed as an addition to Dr. Mason's announcement in this issue. It certainly should stir our people up to do their best in the way of an exhibit.



Combs built by bees, when one and two years old, are more fragile, and require more care if used in the extractor, than those built on sheets of foundation. With the former it is necessary to turn the extractor very gently, and avoid sudden stoppages. The third year, the natural combs become more firm.



#### THE BEE IN LAW.

##### Property Right in Bees.

BY R. D. FISHER.

There is natural cause for wonder why the legal status of the bee has not been more definitely exploited, since bee culture has long since passed from that of a fad, by a large number of persons who had no definite reason why they kept bees other than that they can be kept on a farm without expense and with very little trouble, to that of a scientific and profitable business. Just as the law of real property differs from that of personal property as dealing with what is immovable and indestructible, so the law of animate differs from that of inanimate property—a distinction far more significant in the science and philosophy of the law than one would suppose who had given the subject but little thought. As a matter of fact, these powers and liabilities in animal life form the basis of an elaborate system of rights and responsibilities, and by no means has the bee been overlooked or wholly disregarded. However, so far as the present writer has been able to ascertain, no effort has been made, as yet, to work these scattered elements into any sort of publication. It is hoped, therefore, that this and subsequent articles may serve to the accomplishment of such an end.

It must be primarily understood that, animals being personal property, the whole law governing such property is applicable, of course, to bees; but it is only such particular portions of that law as relate distinctly to their peculiar qualities that can be called, with any technical accuracy, the "Law of Bees."

Matters connected with their natures, dispositions, and habits, their inclination and liability to injure and be injured are proper subjects for consideration, and are more and more



becoming active factors in the results of litigation to establish the property rights in the bee and the liability of the owner thereof.

In the treatment of this subject it will be our object to let the cases speak as much as possible for themselves—in other words, to give, as far as is consistent with reasonable brevity, the facts and grounds of the decisions of our courts in the more important cases. Further along, if deemed advisable, we may compile a digest of the statutory laws of the respective States on the subject of bees; but at present we shall only aim to awaken in our readers a deeper interest in the rights and responsibilities of the bee-keeper as relating to property rights.

#### GENERAL NATURE OF THIS PROPERTY.

The distinction between wild and domestic bees as subjects of property is one that exists both in the common and the civil law. Without discussing the question whether all bees were originally wild by nature until tamed by man, and the distinction of the law between such animals as we generally see tame and are, therefore, seldom, if ever, found wandering at large, and such creatures as are usually found at liberty, though sometimes tamed and confined by the art and industry of man, it is safe to assume that a qualified property right may exist at common law in bees where a man reclaims and tames them, or confines them so that they can not enjoy their natural liberty. So in the civil law, the title termed "occupation," or the acquisition of ownership by taking possession of bees formerly without an owner, exists; but it must be kept in mind that, "if we have caught a wild beast or bird or fish or bee, the moment this animal has been caught it becomes ours, and it is regarded as ours so long as it is under the restraint of our safe keeping; but when it has escaped from our keeping, and regained its natural liberty, it becomes the property of the first taker, because it ceases to be ours; and such an animal is considered to regain its natural liberty when either it has escaped out of our sight, or, though still in our sight, the pursuit is difficult."

Having laid down the general rules that govern property in wild animals, we shall consider their application to bees. With regard to bees, Blackstone, the great law-giver, says: "Bees also are *feræ naturæ* (wild by nature); but when hived and reclaimed, a man may have a qualified property in them by the law of nature as well as by the civil law." And to the same purpose, not to say in the same words with the civil law, speaks Bracton: "Occupation, that is, hiving or including them, gives the property in bees; for, though a swarm alights upon my tree, I have no more property in them till I have hived them than I have in the birds which make their nest thereon; and, therefore, if another hives them, he shall be their proprietor; but a swarm which flies from out of my hive is mine so long as I can keep it in sight and have power to pursue them; and in these circumstances no one else is entitled to take them." But in respect to such animals as are in the habit of

going and returning, as pigeons and bees, which are accustomed to go into the woods and fields, and come again, we have this traditional rule that, if they cease to have the intention of returning, they also cease to be ours, and become the property of the first taker, because they cease to be what are termed *animus revertendi* when they have discontinued their habits of returning.

Ownership in bees is *ratione soli*—that is, bearing reference to the soil, and is said to be the ground of ownership in bees. So in the civil law, if a swarm of bees had flown from A's hive they were reputed his so long as they remained in sight and might easily be pursued; but they do not become private property until they are actually hived. Bees, along with other wild animals, furnish the only distinct class of chattels which have been made the subject of primary occupancy. Even here, notwithstanding the universal principle of law, that all mankind may pursue and take animals, whether of the air, earth, or water, in a wild state, the first occupant becoming the owner, there is found a restraint which ownership of the soil imposes, and which fastens the closer as population grows and civilization advances.

[This is one of a series of articles that will follow in the coming issues. We hope to have them in book form for convenient reference, as there are many "nice points," as a lawyer would say, affecting bees.—Ed.]

#### MEASURING BEES' TONGUES.

BY A. J. WRIGHT.

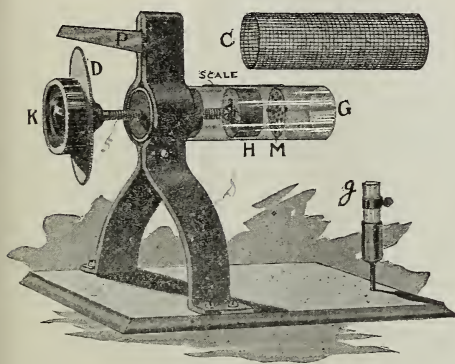
I have been reading with much interest the various articles on the above subject appearing in your journal from time to time. There can be no question, I think, that a long-tongued bee has a decided advantage over a short-tongued one in the ability to reach the nectar; and I think, too, that the agitation of the question will result in an improvement of stock; but it strikes me that the experiments have not been carried far enough. In looking to the length of the tongue, have we not overlooked the capacity of the honey-sac and the individual energy of the bee—two very important factors? Suppose we take two bees having the same length of tongue, we would conclude, if we stopped here with the experiment, that these bees would store an equal amount of honey; but it is a fact that there is as much difference in the capacity of the honey-sacs and the energy of bees as in the length of their tongues. It is also a fact that a long-tongued bee has a larger honey-sac than a short-tongued one, and also greater energy.

Now, while this places long-tongued bees in a class by themselves, and gives them a great advantage over short tongues, the fact still remains that there is a difference between individual members of the long-tongued class—a difference in the capacity of the honey-sac and the energy of the bee.

With the foregoing in mind I began a year ago to experiment and construct a glossometer

that would give practical results along the right line.

A glossometer, to be practical, must be simple in construction, and free from delicate springs and wires. It must be direct in action. It must be accurate. It must measure the length of the tongue of the *living* bee, not the length of tongue of the carcass. It must give measurements of the capacity of the honey-sac, and must show the energy of the bee. It should have a scale or dial that can be plainly read to thousandths of an inch, without the aid of rule or lens. To meet the requirements I constructed the instrument shown.



WRIGHT'S GLOSSOMETER.

- S, metal standard.
- P, pointer, or indicator.
- G, glass tube, length 2 in., diam.,  $\frac{1}{2}$  in.
- M, mica disk.
- D, dial plate, reading to thousandths.
- H, candy-cup filled with Good candy.
- g, small glass tube to hold thin honey or sugar syrup.
- C, wire-cloth cage.
- s, screw.
- K, knob.

The bees to be tested are placed in wire cage C, which is slipped over glass tube G, allowing bees to enter the tube as far as the disk, M, which has perforations corresponding in shape and size to the large end of the largest red-clover corolla-tubes. The honey-cup H is brought in contact with this disk by means of the screw. The bees will quickly begin to take up the candy through the perforations. The instrument is placed before the operator, with knob K at left hand, and, preferably, in front of a window or before a lamp or other good light. When the bees are working at the candy, the knob K is turned slowly away from the operator. This causes the candy cup to recede from the disk, and this is continued until the bee has done its best, when the pointer is brought down upon the dial, and the reading to hundredths or thousandths is easily taken.

To get a clearer idea, we will suppose that the threads of the screw are one-tenth of an inch apart. Then it is evident that one complete turn of the dial-plate will cause the candy-cup to recede one-tenth, or ten-hundredths from the disk. It is also evident that, if the circumference of the dial-plate is five inches, and this is divided into ten equal spaces, each

space will be  $\frac{1}{2}$  inch; and if the pointer is caused, by turning the dial, to move over this  $\frac{1}{2}$  inch, it will move the candy-cup only one-hundredth of an inch away from the mica disk; and if this half-inch space is again divided into tenths, each space will be  $\frac{1}{20}$ , which would represent only a thousandth between the disk and candy-cup; and the divisions on the dial can, of course, be easily read without the aid of rule or lens.

The energy of the bees is clearly shown in their efforts to reach the candy. While some are easily discouraged, and give up without much effort, others will persevere, and work and stretch their tongues to the utmost limit; and when the candy is clearly beyond their reach they seem loath to yield.

The small tube, g, is filled with thin honey or sugar syrup, and brought up under the wire-cloth cage. The bee to be tested may then be left to fill its honey-sac. The little band of brass may then be moved until its rim just comes in line with the surface of the liquid left in the tube, which is then removed and placed on top of the large tube horizontally, and measurements to thousandths of an inch are made in the same manner as in measuring the tongues. One or several bees may be placed in the cage for tongue measure, but, of course, the honey-sac of one bee only can be measured at one time. It occurs to me that any arrangement which requires the bee to put its tongue through wire cloth must be a partial failure, as the meshes vary considerably in size, and the *shape* also gives chance for considerable variation. It seems to me that any attempt to measure a colony collectively would not amount to much, as at the best only the longest tongue of a single bee in the colony would be the result, and then it would not be at all certain that the bee in question belonged in the colony at all, as bees mix to quite an extent.

Glossometer tests bring out some curious facts. One is, that the living bee, when reaching for nectar, can protrude its tongue further than the tongue of the dead bee can be stretched without rupture. Another striking fact is, that the bees of a queen, *if pure*, differ but little from each other in tongue measure, capacity of the honey-sac, and working energy.

I am of the opinion that the only practical method is to measure the actual reach of tongue of the *living* bee through perforations of a standard size. I have adopted .065 as a standard diameter. Wire cloth in common use measures the square way of the mesh about .075 to .08; cornerwise it measures from .10 to .11, showing its unreliability. I believe the glossometer will recommend itself to every humane bee-keeper, as it renders unnecessary the killing of our pets to determine the length of their tongues.

If we are to accept .25 ( $\frac{1}{4}$  inch) as the maximum depth of red-clover corolla-tubes, then I think we need not worry much about the best of our long-tongued strains being able to secure the crop. I have found bees in my best colony of Sweetheart's that would reach .259, and I have found none showing less than .238. This is not a free advertisement for this strain,



as every queen-breeder has his favorites; but it shows that, in the near future, the red-clover crop is *ours*.

Bradford, N. Y.

[Mr. Wright is entirely correct in regard to wire cloth. The meshes of ordinary queen-cage cloth are too large, and, what is worse, they are usually somewhat irregular. Sometimes the bees will stick their noses down through a large hole, and at others through a small one. Perforated metal having openings as large as the corolla-tubes of red-clover, for instance, should be used. Then care should be taken to see that there are no burr edges around the perforations. It is possible and even probable that a glossometer—something that requires the bees to stretch their tongues (while in life) to their utmost limits may be better than the measurements effected by methods described in GLEANINGS recently, by which the bees are chloroformed, decapitated, and the tongues combed out on the steel rule. But such treatment can hardly be regarded as inhuman, as suggested by Mr. Wright, for the simple reason that any animal or insect under the influence of chloroform experiences no pain, much less when the head has been severed from the trunk; but for other reasons the glossometer may give us more uniform and accurate results; and if so I should be very glad to acknowledge the fact.—ED.]

#### WHITING'S GLOSSOMETER.

A Simple and Practical Device.

BY W. M. WHITING.

I take the liberty of sending you a feeder that I have been experimenting with to find the length of my bees' tongues. The parts of the feeder that hold the diluted honey have been waxed so as to stop all absorption. I first level the hive so that the top is perfectly level. Then I bore an inch hole through the top board, and place the feeder over the hole. In a short time the bees will lower the liquid as far as they can reach it through the wire netting. I have one colony of bees (and the best honey-gatherers I ever owned) that lower the liquid  $\frac{1}{16}$  in.; and as the longest-tongued bees that I ever read about have tongues only  $\frac{3}{16}$  in., I think my feeder must be a little off, as I

do not lay claim to owning the longest-tongued bees.

Now it strikes me that, if the proper-sized wire mesh could be decided on, then every bee-keeper with some such arrangement as I send you could find the length of his bees'

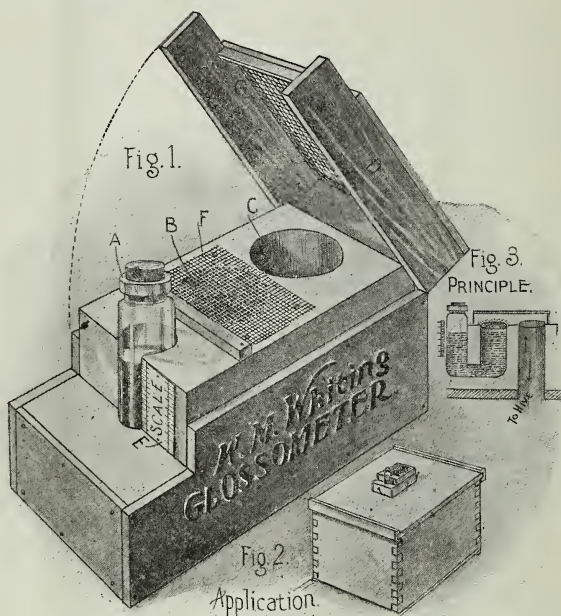


FIG. 1.—A is a bottomless bottle connecting with wire-covered hole B, which passage also is well waxed to prevent absorption.

C, hole or bee-passage connecting through the cover of the hive. E, measuring-scale. F, wire mesh covering hole B. D, confining-frame. G, wire cloth covering D.

FIG. 2.—This shows the application of the glossometer to hive D.

FIG. 3 shows the principle involved.

tongues with very little trouble. I have tried measuring the tongues with a rule, and I consider it too uncertain.

East Orange, N. J.

[This glossometer is all right, I think, and so simple any one can make one. We have tried it to some extent, as we go to press, with fairly good results. The wire cloth through which the bees run their tongues is 11 meshes to the inch. It is so coarse the bees can run their mandibles clear down through the meshes. For this reason the tongue-reach is longer than what we get by our steel-rule plan.—ED.]

#### A VISIT TO HENRY ALLEY.

BY A. C. MILLER.

Mr. Henry Alley, easily the foremost queen-rearer in the country, is as hale and hearty at 67 as many a man at 40. In a recent visit to his apiary I found him hard at work, moving with a quick, springy step, all his operations betokening a sound body and an alert mind.



His home in the pretty country town of Wenham, Mass., is almost hidden among the trees, and his apiary was so distributed among the raspberry and currant bushes that a satisfactory photo was impossible. Mr. A. said he had been too busy to trim away the bushes and to slick things up, but the essentials he certainly does not neglect. His kitchen garden was as free from weeds, and as thrifty, as any one could desire; and while his workshop, spare hives, etc., were in some confusion, it was only such as is brought about by a rush of work. It was a pleasure to watch him as he made up nuclei, fixed frames of cages containing cells or queens, and prepared strips of comb for cell-building. To those who are not familiar with Mr. Alley's system a brief description may be interesting.

First, his breeding queens are kept in little hives containing five frames about five inches square, and from these little frames he cuts a comb whenever he wants eggs for cell-building. For doing this work he prefers black bees, buying many colonies of them every spring. He has to send far afield for them now, as those anywhere near Wenham were gone long ago. When received, the entrance is covered with a drone-trap, and all black drones kept from flying until he is all ready to use the colony for cell-building. To prepare them for this they are taken into his workshop where the queen is found and removed, and the bees are brushed into an empty hive and shut in with a wire-cloth cover, so to remain for several hours. When they have been shut up long enough, the prepared eggs are given to them and they are left until night when they are placed on a stand out of doors, and the entrance opened. The operation of preparing the cells I will describe as I saw him do it.

In his shop he lighted a kerosene-stove and set on it a pan containing a mixture of bees-wax and rosin. Then he took two L. frames from which the lower half of the combs had been cut, and, by a quick stroke of his knife, removed the remains of a previous lot of cells. He then went to the colony of one of his breeding-queens, picked out one of the little combs, stepped back into the shop, and, with a hot knife, cut the comb from the frame, slit it into strips containing one row of cells each, took a match and destroyed the egg in each alternate cell on one side of the strips, dipped the other side into the melted rosin and wax, and stuck them to the bottom edge of the L. combs above referred to. His next step was to hang these in an empty hive, fill the rest of the hive with combs of honey and pollen, jar the confined bees to the bottom of the hive they were in, put on the top of it a zinc excluder ("drone-strainer" he calls it), place on this the hive containing the prepared strips of eggs (enough for 60 cells), and over this a wire screen. In a few minutes a large part of the bees were in the upper hive. The operation from the time he went for the eggs until they were given to the bees was just eight minutes. When the cells are sealed they are cut apart and each one put into a little cage by itself, and a lot of these cages are fastened

into an L. frame and hung in any queenless colony until they hatch. The next step is the making of a lot of little nuclei from the small 5x5 frames, stocking them with bees, giving them a virgin queen and carrying them to an out-apiary where he has his drone-rearing colonies.

I am fairly familiar with both this and the cell-cup system; and for celerity of operation and excellence of results I consider Mr. Alley's plan far ahead of the others. His system is certainly best for those bee-keepers who rear queens solely for their own use; but each commercial queen-raiser will use the system he is most accustomed to. He had in cages a lot of virgin queens of various ages; and finer and larger queens I never saw. From their size I took it for granted they were laying queens just caged, until informed to the contrary.

The Adels are large, active bees, clinging well to the combs, easily handled and reasonably gentle. Mr. Alley speaks highly of their honey-gathering and comb-building qualities; but with them in that respect I am not familiar. The using of black bees for building cells has its advantages (one of which is cheapness) and its disadvantages, the chief being their stings. Ah, but how they stung! They used my head and neck for a pin-cushion, but not a sting did I get from the Adels. Mr. Alley never wears a veil, but does have a handkerchief hanging from the back of his hat to protect his neck and the back of his head. To see him working among the bees one would never think a sting troubled him. He has a pleasant, genial way of treating his visitors that causes a visit to be agreeably remembered.

Providence, R. I., June 25.

#### BEE-KEEPING IN CUBA.

Large Honey Yields; Peculiar Conditions in the Island.

BY FRANK N. SOMERFORD.

After a long disastrous drouth which lasted all spring, greatly shrinking the amount of late spring surplus honey, and retarding natural as well as artificial increase, besides causing great loss to the agricultural industries, we were visited in this section some days ago by one of the heaviest rains known for many years, which inundated large tracts of flat lands, doing great damage. One man alone, a Cuban, lost 300 chickens; another, several colonies of bees, besides several who lost cattle that were staked in low places. Much damage was also done to roads, bridges, etc. This was followed by the hottest weather known for 15 years, as stated by Spanish papers; and now the rainy season seems to have burst upon us, and vegetation is growing at a rate almost astonishing. We are enjoying mud, mud, mud; and wheel-riding, except on the macadamized roads, is done with now for a while.

Mr. Harry Osburn's honey crop for the past season was taken from about 400 hives. I

visited his ranch last summer, and there were over 300 hives; in early autumn he increased 100, which gave a total of about 400. Of this number there are possibly 50 from which no honey, scarcely, was taken.

In Mr. Osburn's calculations I think he should have stated that there were 1200 colonies on his range, including the apiary that he has; and I might add that 500 or 600 of these will barely come within the three miles; or, in other words, are just about three miles away. This, however, doesn't place the entire force of all those bees on that same territory, because, five miles from Mr. Osburn, or one, two, and three miles from the other two large apiaries along the coast, the range is almost as good as if not better than the range near him.

The two other apiaries are separated by three or four miles, thus scattering those bees over a much larger territory than Mr. Osburn seems to indicate. He also signifies that, could he have remained at the apiary and personally superintended or done the work himself, during the winter of 1898, he would have made a great record; yet whoever had the ranch that year secured more than double the amount per colony that Mr. Osburn received the past season.

Taking the unusual amount of 50,000 lbs. from 200 hives, this gives 250 lbs. per colony. Taking the 400 colonies that Mr. Osburn had the past season, that produced 40,500 lbs., this gives a fraction over 104 lbs. per colony. This is not saying much for him as a record-smasher, for a single year, but his figures for a term of years are very large. It should be taken into consideration, also, that the year 1898 was when farming was paralyzed, and there were but few stocks on the range to eat and trample under foot the flowers that at that time must have grown in profusion everywhere, thus making it possible at that time to secure such large yields.

There is something strange regarding the quantity of honey a bee or a hive will gather here as compared with what a colony of the same strength would gather in the States. In the best of the honey-flow it requires here on an average a third more time or a third longer for a hive to fill up and become ready to extract than in the States. I think several others have noticed this too, and I have heard Mr. Harry Howe say that he has never seen bees work here with the eagerness and rapidity with which they work in the North. I might add, though, that people are affected in the same way; and what is done is by force more than by the natural desire that a person has for activity in the States.

I can look at the cut of "Rambler's Retreat" among the peach-trees, with the fruit in plain view, with a longing eye and watering mouth. It reminds me a little of our mangoes here in Cuba, excepting that the mango grows very large, and tall, almost, as an oak-tree, and are sometimes laden with fruit from the first branches clear to the top, and will have small fruit and ripening fruit at the same time. This is a large fruit, rather coarse, though, that to some extent fills the

vacancy of the peach here. But I am afraid, were Rambler here with that pretty ranch in so much shade, without sheds, he would soon find things unpleasantly damp, especially through June, July, and August. That little 22-caliber honey-elevator looks more like the inventive genius of a novice than the man of Rambler's experience; and should he, while extracting, allow his thoughts to ramble as his pen does sometimes he would soon find that honey to be of a rambling disposition also. However, some of our Cuban bee-keepers prefer a little can arrangement, to place honey in the cask with. An American in Cuba, though, can be partially excused for such arrangements, for they tend to concentrate a person's thoughts and keep him from thinking of the good country, good people, good society and surroundings, where the good English language is spoken. That little elevator would, of course, place all such thoughts in oblivion, as it were, to the operator, whose thoughts would be occupied thus: "Can I uncup this comb before that can runs over? can I throw out these two combs before that can runs over? can I put some more fuel in the smoker by the time that can is full?" or else in steps a friend whom you were not expecting, and you can't give him a welcome handshake, and an unrestrained greeting, on account of that miserable little can.

Yes, you all know this, and even more is true. I've traveled this path, and have decided, just for one season, a platform just high enough to allow the honey to run right into the tank. This must have a long gradually sloping plank approach to allow the cart to run right up on the platform beside the uncapping-box and extractor; then you can work unmolested; and should you hear some noise in the apiary, or something call your attention, your honey is going right on into the tank. And this question of honey at a little less than 3 cents per lb. that we have to contend with here is not conducive to a desire to handle it any more than is actually necessary.

However, I am glad to learn that Mr. Osburn has so satisfactorily settled this question for himself that it gives him no uneasiness. I think I shall go over and see friend O., and see if I can't get a key to the situation. All Cuban bee-keepers should be annexationists.

Bejucal, Cuba, June 11.

#### THE SWARTHMORE SYSTEM OF QUEEN-REARING.

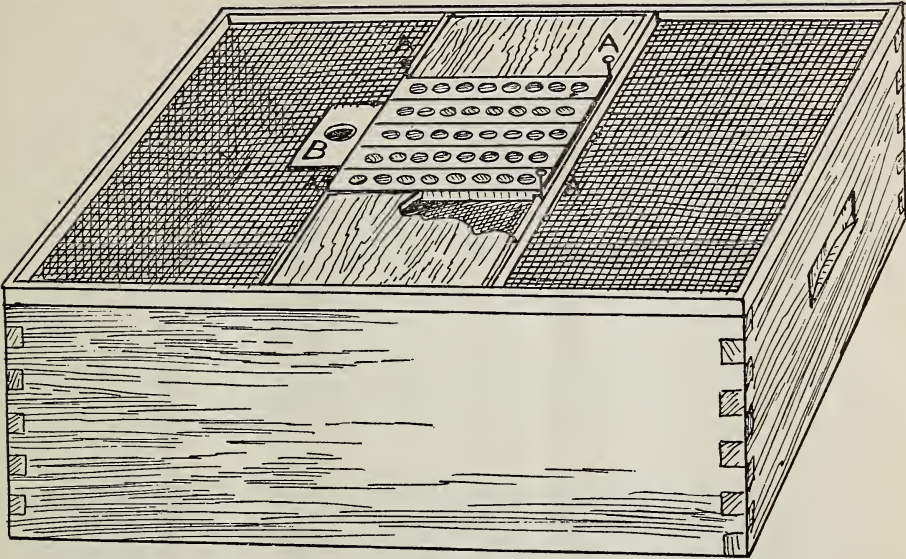
Starting Queen-cells by the Shell cup Plan.

BY SWARTHMORE.

To start queen-cells by the shell-cup plan, proceed as follows:

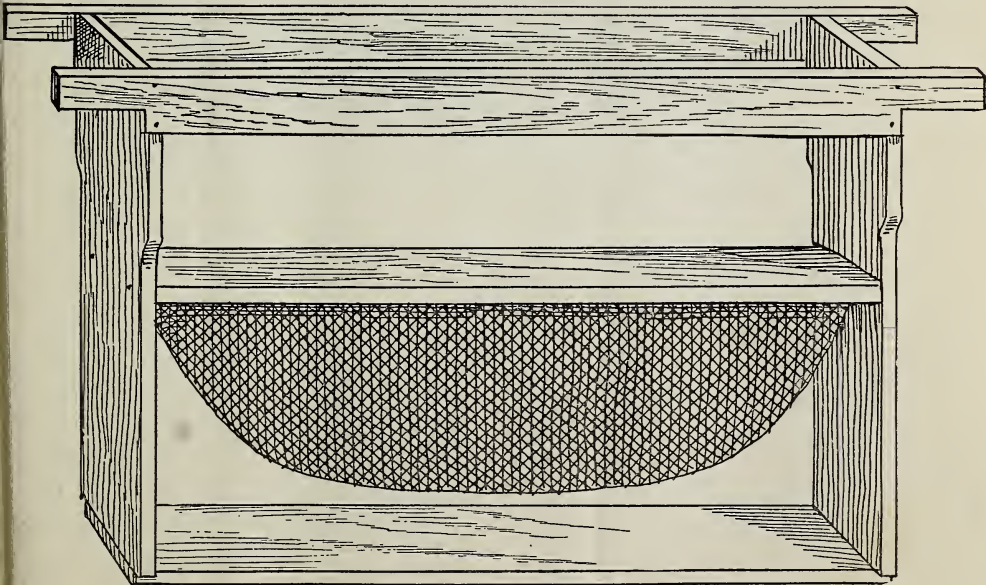
To an empty hive-body attach, at top and bottom, frames covered with wire netting so as to confine a swarm of bees as Henry Alley does in his well-known "swarm-box." In the top screen is left an opening to admit of placing several Swarthmore top-bars side by side, as shown in the drawing. Bind the bars close together with four pins, A, A, A, A. Then





A NEW CELL-GETTING CONTRIVANCE.

Above is shown a cell-starting screen attached to a Dovetailed hive-body, showing manner of adjusting the shells for queen-cell starting.



OPEN-TOP OR BARLESS BROOD-FRAME, FOR CONVENIENCE IN DRAWING CELLS FOR USE.

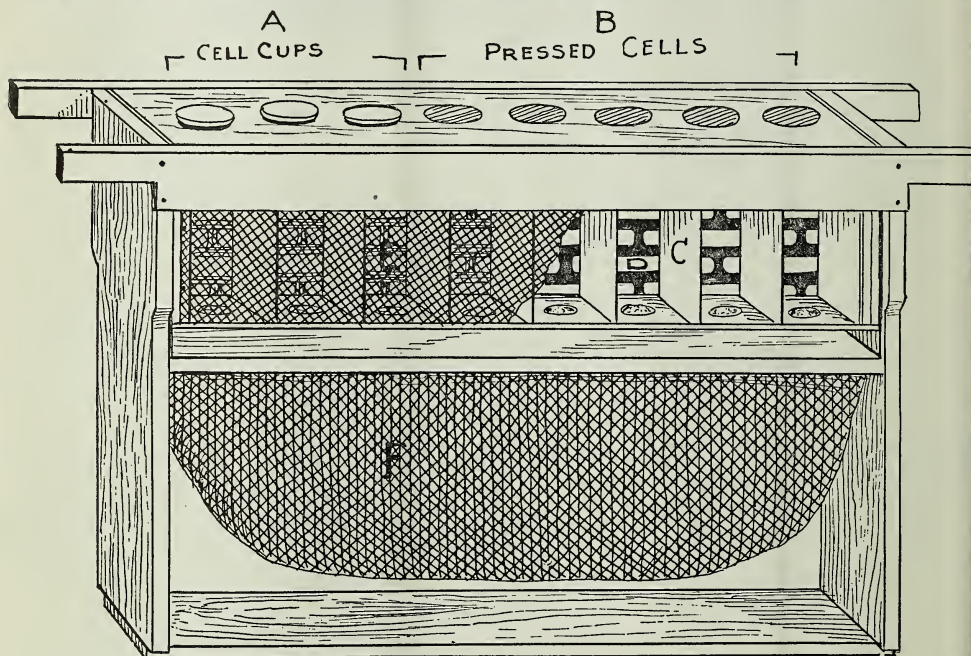
This drawing is from a half-size model. The real frame is L., or any other standard size,

supply the holes in the series of top-bars with compressed shell cups. Now shake into the hive-body a goodly number of bees that have just had their queen taken from them, and, after placing in this live combs containing honey, pollen, and water, *no brood*, put on the cell-starting screen. Then remove the chamber to the honey-house, and leave the bees thus confined until they are fully aware of their absolutely queenless condition — perhaps over one night. In the morning set the hive close up to the bench, and proceed to graft the shell cups. Begin at one corner; and as you draw the shell have ready a blank to plug the hole, and so on, one at a time, systematically, until each cup has been sup-

At the end of 36 hours, place the hive on its original stand; collate the perfect cells and fit the top-bars into the cage parts, slip in the dividing-tins, adjust the zincs, and divide the cages among powerful colonies, allowing no more than 16 cells to a single colony.

If cells are to be finished by queenless bees they need not be caged until capped.

For convenience in distributing cages, or in getting at to remove a single queen, cell, or a cageful of either, at any time, without disturbance to the bees, or the use of smoke, even, have several brood-frames constructed with open tops—that is, the regular top-bar of a plain frame is dropped down about 2 inches, and is there nailed fast to the end-bars. Two



OPEN TOP FRAME WITH CAGE IN PLACE.

In the cut above, A shows shells in place; B, shells removed; D, zinc side; E, wire side; C, division-tins, F, comb or foundation to fill the lower part of the frame.

plied with a larva. Take all the time in the work you wish. There is no need of hurrying, for, even as you proceed, the bees are at work constructing cells from the first cell-cups grafted.

Directly after grafting, fill a salt-shaker feeder with thin honey, and adjust it into the hole shown at B, in the screen. Let no time be lost between the removing of the blank plug and the inserting of the shells or the feeder, lest too many bees escape. There is no need of allowing even one bee to escape if the apiarist is skillful. Leave the colony undisturbed until the cells are well under way. Make examination toward evening by drawing one shell at a time, marking any that have failed, and the next morning new larvæ can be grafted into each shell marked.

strips are then nailed edgewise across the top, as distinctly shown in the drawing, thus forming a frame with an open top, into which two cages will fit nicely. Fill the lower section of this frame with brood comb (or full sheets of brood foundation can be used), and hang in the midst of any powerful colony all ready to receive nursery-cages at any time. When not occupied by cages, fill the space with a block of wood cut a little short so it may be easily removed, even if covered with burr-comb.

Cover the frames with an ordinary sheet split in the middle so as to expose the shell cups; then when you want cells, simply draw them—no smoke, no disturbance to the bees.

[I do not hesitate to say that, in my opinion, Swarthmore has devised a very simple



and perfect system of queen-rearing. The feature of having removable shells that can be handled for grafting or when the cells have been completed, is excellent. There are several other unique ideas that Swarthmore has that will be described later.—ED ]

### THE HIVE I USE.

Producing Comb and Extracted Honey; Eight and Ten Frame Langstroth Hives; the Hyde-Scholl Divisible-brood-chamber Hives.

BY LOUIS SCHOLL.

After considering all of the many good points possessed by some of all the hives before the bee-keepers now, with frames of different depths and lengths—eight, ten, and more frames in a brood-chamber, using one deep body for the brood-chamber with shallow supers for the surplus, and others with two shallow chambers, and also with the supers of the same depth, has led me to try a number of hives which will be described further on.

Starting with the eight-frame Dovetailed hive, which was then considered the standard size, I thought myself up to the times. But these soon proved to be too small for this southern climate, with its long flows, so the ten-framers were considered. These proved to be some better; but the depth of the Langstroth frame proved to be objectionable. This was true when producing comb honey in section-supers above the brood-frames. There was trouble from the bees filling the deep frames with the honey that ought to go into the sections—this to a greater extent during a slow flow, and especially along the top edge of the comb above the brood; and after this honey was once sealed, the bees were quite loth to store surplus above such sealed stores, causing them to loaf and to hang out in great festoons all over the front of the hive.

Besides, the queen was also crowded out, as the bees filled every cell with honey as fast as the young bees hatched out, although there was plenty of room in the super above.

Now, the question was, how to avoid this trouble and how to get that honey out of the way and into the sections, and this also with as little labor as possible.

Of course, this could be done by inverting the whole hive and letting it remain for a few days for the bees to remove the honey; but this causes a great deal of trouble and labor. Here, now, is a good point in favor of reversible frames, but I am not an advocate of such.

Then I found that it can be accomplished to a great extent by using a divisible-brood-chamber hive by exchanging the upper case (which has the honey along the top) with the lower one, which puts the honey in the center of the brood-nest where it will be removed by the bees.

As there now is brood in the frames which are now above, the bees are compelled to store the honey in the sections above; and by removing the honey in the brood-chamber the bees also provide more breeding room for the

queen. By exchanging the cases of the brood-chamber in this way at certain times during the main honey-flow it is possible to get nearly all the honey of that flow into the sections.

Then shallow frames possess a great many other advantages over deep frames, which I learned when using shallow frames in supers above my standard Langstroth hives, which led me to adopt a hive with shallow frames throughout. Especially when running for extracted honey, the hive consisting of two, three, or more cases with all shallow frames, one is not bothered with frames of different depths, and all cases are interchangeable.

These cases are more convenient to handle, as they are not as heavy as full-depth supers, and are also easier to remove when full, as, by smoking the bees thoroughly when raising the cover, they can be readily driven down out of such shallow supers, when they are taken off practically free from bees, and without any brushing of bees.

Then the shallow frames are easier to uncap, as one draw of the knife uncaps a whole side of the comb, while it takes longer with deep frames, besides being awkward to handle, and the danger of broken combs.

Shallow frames I prefer, too, for a great many other purposes in the apiary; and as there is not very much need of handling the frames individually except in a few instances, the hive is mostly handled by cases with the whole set of frames; and all that is necessary when examining colonies for any purpose at any time is to tilt the upper case of the brood-chamber back, and then one can get a full view of the brood-nest.

In this way it is quite easy to ascertain the conditions and strength of a colony at any time, and also during the swarming season, when looking for queen-cells. If there are any present in any hive they will generally be found on the bottom edge of the upper frames.

When providing more room for the queen in early spring, or for honey later on, one of these shallow cases is added, without the bad result of giving too much room at once, as is mostly the case when giving full-depth supers.

Many other points in favor of shallow frames used in connection with such a hive could be recited; but as time and space do not permit, I will now give a description of the hive which, after being used in the apiary, has given good satisfaction.

The brood-chamber consists of two shallow dovetailed cases, standard ten-frame L. size, but only  $5\frac{3}{4}$  inches deep each, both giving a brood-chamber  $11\frac{1}{2}$  inches in depth.

Each case holds a set of 10 shallow Hoffman self-spacing frames, the same in size as the standard L. frame, but only  $5\frac{3}{8}$  inches deep; this makes 20 frames, with a comb surface of nearly 12 Langstroth frames, thus providing a large brood-nest.

The Danzy bottom-board and cover are used on this hive.

The same shallow-frame cases are used when producing extracted honey, and the supershell of the section supers is one and the same kind.

The comb-honey super is the same in every

particular as the "Ideal," with tall plain sections,  $3\frac{3}{8} \times 5 \times 1\frac{1}{2}$ ; 35 in each super, in 7 rows, 5 in a row, resting on plain slats the same width as the sections, and these taking up the full inside length of the super, except the separators, as the Hyde-Scholl No. 2 separators are used in this super, one between each row of sections, and also one on each outside row next to the wall, when all is tightened up with a follower-board and super-springs.

This super is, in my mind, superior to any other for section honey; and if time permits I will say something more about it in some future article.

Hunter, Texas.

[There is a great deal of sound truth given in the article above. There are times and places when there is an advantage, undoubtedly, in using shallow or divisible brood-chambers. While they have their objections, yet it is probably true, if I may judge from correspondence, that these double brood-nests are increasing in popularity.—ED.]

#### SHALLOW BROOD-CHAMBERS, AGAIN.

The time is drawing nearer when the beekeepers will be putting to the test some of the theories that have been advanced through the journals during the winter and previous season. I suppose that quite a few of the readers of this journal will try the shallow, temporary brood-chambers for swarms or colonies worked for comb honey. I for one shall use that plan for all colonies that swarm or that make unmistakable preparations for swarming. As some who have written on the subject do not seem to have gotten hold of the plan in all its phases I should like to call attention to some points that I consider of the greatest importance.

I will quote from the article by Mr. Atwater, on page 8. He says: "To illustrate, the past summer I hived a strong natural swarm in a single section of the Heddon hive. The frames contained foundation starters  $\frac{1}{2}$  inch wide. The hive was put on the old stand. The three ideal supers were taken from the parent colony and placed on the swarm. Work in the supers went on for about two weeks. By that time the colony was weakened so by the loss of old bees that super work was almost entirely discontinued. A little over half as much comb honey was taken from this colony as from colonies of like strength that did not swarm."

Now, it would seem that Mr. Atwater left out one of the most essential points in the whole plan. I like the plan especially, because the working colony in the shallow brood-chamber *does not* become weak from the loss of old bees, for the reason that I constantly strengthen them by shaking off bees from the hatching combs of brood contained in the parent hive. I use that hive as a feeder, and do not expect to make a working colony out of it for the white-honey harvest.

I make it a point to watch the working colonies closely, and give them bees enough to keep up the maximum force for storing. If I can't get the bees from their own parent hive

I can get them from some other part of the yard. Fifty such strong colonies will store more surplus honey than one hundred with forces divided, and therefore concentration of forces is my motto. As soon as the main honey-flow is over, these working colonies can be united to the parent hive; and if there should be a late crop of amber honey you will have good strong colonies to secure it.

HARRY LATHROP.

Browntown, Wis., Mar. 26.

#### NOTES OF TRAVEL.

A Visit with J. M. Jenkins; the Bloody Shirt, etc.;  
Continued from Last Issue.

BY E. R. ROOT.

After leaving the yard we met on the road one of the veterans of the Confederacy. Mr. Jenkins introduced me as "a real live Yankee from the North." He received me most cordially, after the manner of a true Southern gentleman, which he was. I remarked that I was glad to see that there was less of a disposition on the part of the Northern and Southern press to "wave the bloody shirt" than formerly.

"Yes," said he sadly, "but the bloody shirt is *there* all the same," and I am afraid the remark is too true; and "it will be there" so long as the veterans of both sides remain alive. The boys in blue don't like to forget Libby and Andersonville; and the boys in gray are no more inclined to forget how their homes and plantations were overrun and destroyed, and how, for years after the war closed, the North kept standing armies in the South. But in the minds of the younger generation I am sure these bitter memories will fade, and the great North and the great South will be united as they never were before. While "the bloody shirt is there" it is buried, I believe, where it never more can wave.

We next arrived in Wetumpka, visited the bank in which Mr. Jenkins is a director and stockholder, and then crossed the big bridge for the other side of the town, where our friend's bee-hive factory is located. He has quite an extensive plant—one which will be enlarged to twice its present capacity the coming season. There will be a new and larger engine and boiler, a new double-surfacers planer, besides other new machinery and a brand-new shop.

Of the two remaining pictures, one shows a view of the home yard with its long shed, and the other, another out-yard, the Evelyn, located in a beautiful grove of pines. This yard, as well as the other ones, is under the direct management of Mr. H. Fitz Hart, formerly of Florida. Mr. Hart is a bee-keeper who is exceptionally well posted on all bee-lore, both of this country and of England, for he is a native of that country. While in the motherland he made the acquaintance of such men as Frank Cheshire, who has acknowledged that he received important suggestions and assistance from Mr. Hart in his scientific work. Mr. Hart has written for these columns at va-





J. M. JENKINS' HOME APIARY UNDER SHED; ALSO ONE OF HIS OUT-APIARIES (EVELYN)  
AMONG THE PINES.

rious times, and will be remembered by our older readers.

On returning from the bee-yards Mr. Jenkins proposed that we drive around to some of the cabins of the colored people on his plantation, and talk with them. We drove up to the home of one old colored woman, and Mr. Jenkins, after calling her out to the buggy, began the conversation in this wise:

"Well, auntie, I brought around a real Yankee who would like to know about that gospel train you talk so much about. Is it running yet?"

"You'h jes' right it's a runnin', Mista Jenkins, all de time. Yis, sah; it runs all de time. An' so dis ge'men's from de No'th, is he? Glad to see you, Mista Root. Hab you got on dat gospel train?"

This was a pointed question, and I did not know whether I had got on *her* train or not, and I answered her accordingly.

"Bettah git a ticket putty soon, for it may be too late, Mista Root."

"But your ticket has all run out," said Mr. Jenkins banteringly.

"No, 'tain't, Mista Jenkins. De Lor' Jesus he punched my ticket."

"But your ticket ought to be renewed."

"Yis, yis, Mista Jenkins. I have de Lor' Jesus renew it eb'ry day, Mista Jenkins. Say, Mista Jenkins, does you renew you's eb'ry day? an' you, Mista Root?" said she, looking me straight in the face. I said I hoped so.

"Well, you bettah. De debble is aftah ye, sartin' shu', Mista Root."

"But," said Mr. Jenkins, "how are we white folks going to get on *your* train?"

"We'll all be white when we git on dat train. The' won't be no compahments for brack folks. You, me, an' all on us will be white—yis, sah, Mista Jenkins."

"But where will the black folks go?" inquired Mr. Jenkins.

"If dey doan git on dat gospel train dey'll all go down to hell—yis, sah, down to hell, an', say; dar'll be some white folks dat'll go down to hell. Dey'll be white up heah, but be brack down dar. Yis, sah; dey'll all be brack down dar; but in hebbem we'll all be white, no mattah whethah we got a brack skin heah o' not—yis, sah; yes, sah."

"How do you renew your ticket?"

"I makes my peace with my God eb'ry night an' eb'ry mo'nin'—yis, sa. Say, Mista Jenkins and Mista Root, do you do it eb'ry night an' mo'nin'?"

We told her we tried to, and then drove on to see others.

Mr. Jenkins explained that the religion of the black people is largely sentimental; that some of the loudest shouters would lie and steal, and yet *not seem to know* that their lives were inconsistent. They need a gospel so taught that it will take hold of their lives, he explained. "They need to be taught," he said, "to be provident; to have a sense of ownership, and, more than all, that lying and stealing are an offense unto the Lord."

Mr. and Mrs. Jenkins are earnest Christians, and are doing much for the blacks all around them. The colored folks always had a pleas-

ant smile for "Mista Jenkins," and are always glad to see him.

"But," said Mr. Jenkins, "some of the theories held by some of the Northern white people concerning this race problem will not work out in practice. What the colored people need is not higher education but a practical knowledge of some trade. They should be taught to read and write, to earn and buy a home, not to rent one. Booker H. Washington's methods are all right."

I must confess that many of my preconceived notions have been materially changed since visiting the Southland, and I only wish that there might be more charity on the part of the Christian press of the North in dealing with the race problem.

## CONVENTION NOTICE.

All arrangements for the next convention of the National Bee-keepers' Association have been completed so far as possible, and the convention will be held in the audience room of the Buffalo Society of Natural Sciences, Sept. 10th, 11th, and 12th; commencing on the evening of the 10th. The place of meeting is in the Buffalo Library building, corner of Washington and Clinton Streets, near the business center of the city. The president of the Natural Sciences Society, Mr. Smith, has also kindly offered our Association the use of their library and other committee rooms during the time of our convention, and to do all in the power of the society to help make our meeting a success.

Railroad rates will vary in the different passenger association territory, from one cent per mile each way to one and one-third fare for the round trip. Each person can readily learn the rate on inquiry at his railroad station.

The Buffalo bee-keepers will try to provide entertainment at reasonable rates for all attending the convention, who will notify Mr. Sydney S. Sleeper, of Holland, N. Y., by Sept. 2d, of their wish for entertainment.

In a letter just received from Mr. Sleeper he says, "We want all to come who can, for we wish to make the Buffalo meeting the most pleasant and instructive one that was ever held in America. We will have the co-operation of all the sciences as well as the school board," and names some professional men who are interested in our specialty and will be at the convention to help.

In a long letter from Mr. Hershiser, just received, he closes by saying, "Call upon me for whatever further assistance I am able to render;" and Mr. Penton, an ex-president of the Erie County Bee-keepers' Society, and others, have offered to do all they can to provide for the comfort of the delegates.

As stated in my previous convention notice in GLEANINGS, there will be no fixed program and no papers, and the time will be occupied in answering and discussing questions, except that on Thursday evening there will be a joint session of our association with the American Pomological Society, to discuss "the mutual relations of bee-keeping and fruit-growing;" and Prof. Beach, of the N. Y. Agricultural Experiment Station, and Prof. Fletcher, of the Central Experimental Farm of the Dominion of Canada, will help talk for the bees at that session, and it is hoped that much good will result to fruit-growers and bee-keepers from this joint session.

If any bee-keeper who can not be at the convention has any questions, knotty or otherwise, he would like to have answered at the convention, will send them to me I will see that they are presented.

A. B. MASON, Sec., Sta. B. Toledo, O.

ROBBING the bees is a term used by many of the Western bee-keepers for taking off the finished supers. Our forefathers used to talk about robbing their bees when they sulphured them in the good old-fashioned way, and the term has crept into use, even among up-to-date bee-keepers in the great West.



## APIARIAN EXHIBITS AT THE PAN-AMERICAN.

BY OREL L. HERSHISER.

Now that we have settled warm weather the daily attendance at and interest in the Pan-American is rapidly increasing, and this has been especially noted in the Apian Department. Besides the many visitors who take only a passing interest in the fine appearance of honey, and marvel at the instinct of the bees, we are now having daily visits from scientific gentlemen eager for the more substantial and practical knowledge of apiculture. One professor of agriculture, of an agricultural college in one of our Southern States, contemplates the teaching of apiculture as a part of the course, just as it has been taught for many years at the Michigan Agricultural College, and was therefore greatly interested. One Pan-American commissioner of a South-American Republic is seeking knowledge as to whether bees would be likely to do well on the tablelands in equatorial South America, and when, in the course of our conversation, I learned that bees were practically unknown in his country, and that alfalfa was very extensively and generally grown there, it created that longing for "pastures new" that so many apiarists have experienced in these recent years of failure of the honey crops. Another scientific gentleman and extensive fruit-grower, after a short discussion of the great value of bees as pollenizers of fruit-bloom, expressed a wish that he had a thousand hives of bees within reach of his 200 acres of fruit-trees.

At present New York is the only State represented in the apian exhibits of honey and bees. The show-cases in this exhibit are similar in appearance to those used for apian exhibits at the Columbian Exposition. All the cases are 10 feet high from the floor, and about  $2\frac{1}{2}$  feet wide by 7 feet high, inside measure. The space allotted to New York is approximately  $16\frac{1}{2}$  feet deep by 39 feet front. On the west end of this space is a case approximately  $2\frac{1}{2}$  ft. by  $11\frac{1}{2}$  ft., and set at right angles with the front line of space, and the south end of case on the front line, leaving a spacious passageway between its north end and the wall. A large case about  $2\frac{1}{2}$  by 23 feet rests with its outer edge on the long dimension of the space next to the main passageway, with its west end about  $5\frac{1}{2}$  ft. from the first mentioned case. A third case of the same dimensions as the first mentioned is placed at right angles with the front line and on the east end of space, leaving a space of about  $5\frac{1}{2}$  feet between the east end of the second mentioned case and the west side of the third case. A fourth case, about  $4\frac{1}{2}$  by  $11\frac{1}{2}$  feet, is built against the wall, covering a large window, the glass of which have been removed. This case is built at right angles with the third-mentioned case, and its east end about  $2\frac{1}{2}$  feet from the west and north corner thereof. In this space, and between the north end of the third-mentioned case, is constructed a small locker for the storage of supplies for the exhibit. Thus the entire

space is enclosed, making a spacious booth with a passageway at either end opening into the main passage, and another spacious passageway between the wall and the first-mentioned case opening into the exhibit of The A. I. Root Co. and that of The W. T. Falconer Mfg. Co.

The fourth-mentioned case is for the exhibition of a small apiary of bees at work in hives of various patterns, one of which is an observatory hive. This case has glass front and glass on the west end, and the hives rest on a platform about 9 inches high. The third-mentioned case has glass on the side facing the booth and the end facing the main passageway. The second-mentioned case has glass on both sides and both ends; and the first-mentioned case has glass on both ends and the side facing the booth. The back of this case also forms the background of the exhibit of The W. T. Falconer Mfg. Co., between which and the exhibit of The A. I. Root Co. is a spacious passageway opening into the main passage at the south, and into the New York booth at the north. An ornamental railing and cornice bearing the legend, "The A. I. Root Co." and "The W. T. Falconer Mfg. Co.," surmounted by three beautiful bronzed or golden imitation straw bee-hives, one at either end and one in the center, the latter marking the dividing line between the two exhibits, completes the front of this double booth. The background of the exhibit of The A. I. Root Co. is also 10 feet high, and extends from the main passageway to the wall, a distance of about  $16\frac{1}{2}$  feet. The combined width of these two spaces is  $11\frac{1}{2}$  feet.

Owing to the very general failure of the honey crop of 1900, the exhibits in this line are not what might have been expected under more favorable conditions, and there is no doubt that this failure has deterred several States from making exhibits early in the exposition. I am informed, however, that Canada and several of the States will make exhibits of the present season's honey as early as possible, and we may therefore expect a large showing of the apian interests. It is well known that there are many Canadian bee-keepers who understand well the art of exhibiting apian products. In fact, I believe the Ontario Bee-keepers' Association annually appoints a representative to each of their principal expositions. Buffalo being quite convenient to Canada, we may therefore expect some very handsome exhibits from that quarter.

All the apian exhibits are to be placed in the west end of the gallery of the Agricultural Building, which, when the moving stairway is in operation, will be very easy of access. This gallery makes a beautiful promenade and balcony, from which to view the collective agricultural exhibits on the main floor. Many other interesting exhibits are in this gallery.

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Our white-clover harvest came to a close yesterday—owing to extreme heat and dry weather—22,500 lbs. clover. Basswood is opening, but bees so far fail to find honey in the bloom. N. E. FRANCE.

Platteville, Wis., July 1.



# SWARMING, AND SECTION HONEY.

"Hello, Doolittle! Awful hot to-day. My hives are covered with bees hanging out, and I fear they are going to have a swarming-time just when basswood is at its best, as it will be in ten days now. What method do you use in order to keep the bees from swarming just when it is important to keep the hives crowded with bees in order to secure a good yield of section honey?"

"You are not the first one to ask such a question, Bro. Brown, for this is something bee-keepers have been asking during the past quarter of a century. If the apiarist has done what he could to get his hives full of brood at the proper time, he will have lots of bees in time for the honey harvest—hives overflowing with bees, as you say yours are now; and in order to be successful with them, all swarming should be done before the height of the season arrives."

"But I supposed you did not allow your bees to swarm, for, I am told, no large amount of section honey can be obtained if we let our bees swarm."

"In this you err, for the swarm and parent colony, if rightly managed, will do fully as much with the average bee-keeper, when just one swarm is allowed to issue, as could be gotten were they not allowed to swarm; and, besides, if we tried to keep them together by cutting out queen-cells, giving extra section room, etc., we would, as a rule, only delay swarming, so it would come during the last half of the honey harvest, when it would be the most detrimental to our interests."

"But is there no such thing as non-swarming hives, used when working for section honey?"

"Whenever I hear men talking about non-swarming hives in connection with raising section honey I feel quite a little like doubting their practical experience as apiarists."

"Well, what is *your* method, if you do not use non-swarming hives, and let your bees swarm at will?"

"All my early swarms are hived singly in a hive having but five frames in them, containing a starter of comb foundation about half an inch deep, and the sections are put on at time of hiving, as five frames give hardly room enough for a large prime swarm."

"What do you mean by those coming early?"

"Such as come out from ten to fifteen days before the main honey harvest, which, in this locality, is generally from basswood."

"And do all of your colonies obey and swarm during those five or six days?"

"No; I do not have all swarms come out just as I might wish, but I have a different plan of management for those that come later, say from five to eight days before the harvest. These later ones are united, so that two are

put in a hive filled with combs, the section boxes being set from one of the old colonies on the hive containing the united swarms. Then this old colony is set on a new stand, and the hive containing the two swarms put in its place, thus giving all the field bees from this colony, in addition to the two swarms, which makes a colony which will do wonderful work during the honey harvest, a colony from which I take 100, 150, and even 200 one-pound sections of the choicest of honey, according as the season proves."

"But what about the queens? Do you let both go in with the doubled swarms?"

"No. The queens having their wings clipped gives me the power of disposing of them as I think best, and so I let the queen go back with the colony which was moved to a new stand, and allow the one from the colony not moved to go with the united swarms. The moved colony losing not only the swarm, but also all of its field bees, feels so poor that the queen-cells are torn down, and all idea of swarming is given up; but this colony soon picks up from the multitudinous emerging brood, so that often it will do quite good work in the sections."

"But will not there be after-swarms from the other parent colony?"

"The hive furnishing the queen for the doubled swarms is not disturbed in eight days, at which time the first young queen will have emerged from her cell, when the hive should be opened and all queen-cells destroyed, which will entirely prevent any attempt at second or after-swarming."

"But if all have not swarmed up to within a day or two of the opening of the harvest, what do you do with them—keep on uniting two swarms together?"

"No. All that have not swarmed at the commencement of the honey harvest are made to swarm in this manner: A hive is filled with frames of empty combs, or those partially or wholly full of honey, and placed upon the stand of one of the colonies which has not swarmed, and all the sections are taken off and placed thereon; then all the bees are shaken and brushed off their combs of brood and honey in front of this prepared hive. Thus we have the queen, bees, partly filled sections, etc., which make a colony ready for business at once. Previous to this a few nuclei should have been started, so that we may have the needed laying queens to use. Now take all the combs from which the bees were brushed except one, and arrange them in the hive, carrying it to the stand of another colony which has not swarmed. Next take the comb of brood which was left out, and go to a nucleus, taking out the frame having the laying queen on it, and put the comb of brood in its place. Take the frame (bees, queen, and all) and set it in the place left vacant for it when arranging the combs of brood. Put on the sections, and when all is complete move the colony, not having swarmed, to a new stand and set the prepared hive in its place. Thus we have a laying queen and enough of her own bees to protect her, combs full of brood, and all of the field or old bees



from the removed colony, which makes a colony that is ready to go into the sections in a very few days. The removed colony has simply lost the old or field bees, so as to stop the swarming impulse, and in a week will be ready for work in the sections again."

"That sounds good, and I believe I will try some of my colonies that way. But don't you think non-swarming would be desirable under any circumstances?"

"Yes, I certainly do, especially for out-apiaries. We have many of our best beekeepers at work in the matter, and I fully expect that, before the year 1925 shall be ushered in, something of universal value will have been brought out for the benefit of the fraternity. But the above is as good as any thing in sight at present for the home apiary, such as yours. But I hear Mrs. D. calling me, and I was to help her a little while."



#### STAYING FOUNDATION WITH WOOD SPLINTS; THE PLAN A SUCCESS; HOW TO USE THE SPLINTS.

Noting your editorial footnote in regard to wood splints, as advanced in *Stray Straws* by Dr. Miller, I beg to say that I have used splints with best results to a considerable extent. These splints need not be waxed, as the queens lay in the same regular manner on the splints in the bottom of cells as on either side of the splints in adjacent cells. I used splints sawn from cottonwood lumber; but some material of harder texture may be more suitable. These splints were  $\frac{3}{8}$  by  $\frac{1}{8}$ , and  $\frac{1}{4}$  inch longer than the inside depth of the frames. A saw-kerf is required in both top and bottom bars for the insertion of the ends of the splints. These should be  $\frac{1}{2}$  deep. No fastening is required if the sheets of foundation touch the top-bars the entire length. Otherwise the foundation bulges from the weight of a new swarm, and irregular, wavy combs are the result. Seven splints will answer to the frame with medium brood foundation; for light brood, 8 splints would probably be required. With foundation wired from the mill, the foundation would still have to be attached to the frames; with the splints, the foundation is put in the frames, and securely stayed at the one operation. I could put in frames from 100 to 125 sheets per hour, with the splints, and I never have seen more perfect combs, all things considered. They stand extracting remarkably well. No cracks appear in the combs from this strain, as with horizontal wiring. I wrote you a few years ago about this matter, and again am prepared to say that you can advocate the general adoption of wood splints for foundation brood-combs, without hesitation as to their giving any dissatisfaction.

In putting in the splints, a board of suitable

thickness is placed inside the frame. Put 4 splints in place, then lay on the sheets of foundation; then put the other splints in place and roll them down with moderate pressure. Turn the frame and roll down the first splints; and this completes the job. Why not get out a few of these splints, and give them a trial? I am convinced that they will meet with your approval. B. F. AVERILL.

Howardsville, Va., Apr. 9.

[I believe the use of wooden splints is all right; and for some bee-keepers it may be the very best method of staying up foundation. Personally, we here at the Home of the Honey-bees prefer horizontal wires—wires fastened to the end-bars of the frames.—ED.]

#### HOW BEES USE THEIR TONGUES IN SIPPING UP HONEY; THE ALLEGED BIAS OF THE EDITOR.

After reading the discussion of long tongues, beginning on page 476, I began trying to think of some reason why bees with long tongues would be better on other flowers than red clover. Wishing to observe closely just how bees use their tongues, I took some honey in a bottle, and a small piece of board, and went out into the apiary. In the first place I put some large drops of honey on the board, and presented it to the bees. It took only a minute to see that they always inserted the tongue into the drop about one-third its length. The honey was then spread out on the board as thin as I could spread it with my finger. In sipping this, the bees doubled the tongue back about the same distance that they inserted it in the drops in the first instance. When the honey was nearly all taken up, so that the board was only wet with it, they doubled their tongues back still further. From those observations it seems to me that the bees can take honey faster, at least, with the tongue bent backward at some distance from the tip, and I believe they would have much difficulty in getting honey if it could be reached only with the extreme tip of the tongue. The tongue is brush-like at the tip, and honey could rise on it only by capillary attraction, not at all by suction. Of course, we can not see how the tongue is used in a flower-tube, but it is quite probable that it is used the same as on a flat surface. If this be the case, a long-tongued bee could gather a load in much less time, even on white clover, than a short-tongued one; for the tenth part of a second saved on each floweret would enable it to get its load in 30 per cent less time, which would mean 30 per cent more honey.

In regard to the bias of the editor, alleged by Mr. Doolittle, in looking over *GLEANINGS* for the last year I have been unable to find an instance where the case was not stated with perfect fairness. The editor undoubtedly knows (what every one should know) that the best way to convince an opponent is to show a friendly consideration for the evidence on the other side.

C. F. BENDER.

Newman, Ill.

[The microscope shows that the bee's tongue is made up of a series of compound tubes.

There is one very small one that reaches clear to the end of the tongue; but this tube is so minute that the process of taking honey through it is very slow. But your point, that bees bend the tongues when taking honey rapidly, is true, and therefore long tongues would be an advantage, even with white clover.—ED.]

#### SHORTER STINGS V. LONGER TONGUES.

So much has been said recently about long-tongued queens that I feel that there is another "burning" question that should be brought, more or less, before the public; viz., produce bees with short stings. Every time I get this "pointer" I come to the hasty conclusion that the barbed-wire injector is about two feet long. That's an objectionable "point," eh? It is indeed an "intricate point" to overcome; but she (the workers) should have more tongue and less sting. I'm not pugnaciously inclined, as I would not walk across the street to witness a so-called prize-fight; but I might believe in the plan to catch the drones and attach eight-ounce gloves to their fore hoofs so that, during the virgin's flight, she would be so frightened by the "sporty" costume of her male attendant that her offspring would be birth-marked, and known thereafter as "boxer" bees. If some inventive genius can not find a means to "curtail" this "intricate point," why, I will think seriously of running opposition to our hot-air and steam-heater establishments. What is the use of going to the expense of purchasing coal to heat our dwellings when you can run an apiary to supply the heat? If it's extremely cold weather, apply three bees to your anatomy; milder weather, one would be quite sufficient. I'm with the queen-breeder who can give more attention to the rear end. These rear-end collisions are becoming entirely too numerous.

Cranford, N. J., May 9.

RESNAW.

#### HOW LONG WILL A QUEEN LIVE AND DO GOOD WORK?

In going over a yard recently bought, the other day, clipping the queens, I found one already clipped. The man who is working the yard said he knew there had never been a queen clipped in that yard, and could account for it in only one way. This particular hive, with others of the same kind, had been bought and brought from a distance, six years ago, and this queen must have come from that yard. If F. McNay sees this article I wish he would answer it, as this queen was found in his old Mauston yard, in a hive with oak top-bars. The queen had a fine lot of brood.

Bees in this locality are building up finely.

C. H. PIERCE.

Kilbourn, Wis., May 18, 1901.

[I saw Mr. McNay at Los Angeles, and it is his practice to have young queens. Mr. McNay is a very successful bee-man, and one of his secrets of success is in having young queens. I hope if he sees this he will give us the further history of that old queen if he can.—ED.]

#### "BAIT SECTIONS;" DIFFERENCE IN EXPERIENCE.

Dr. Miller wonders what makes the difference between my experience and his in using bait sections (p. 379, May 1st). I believe he hints at the reason himself in the last three lines of his Straw. I think likely that, in a slow or short honey-flow, the baits would be sealed as he says. Our honey-flow always comes with a rush, as thousands of acres of alfalfa come into bloom at about the same time. The bees pile the ready-made combs full of thin honey; and the sections being thick the honey does not ripen as fast as that stored as the comb is built, so they just take their time about sealing it, and we often find sections left until the end of the season. I think this is probably another case of "locality."

MRS. A. J. BARBER.

Mancos, Col., May 10, 1901.

[When Mrs. Barber speaks of locality she hits the nail on the head. As I travel over the country I am more and more impressed with the differences in locality.—ED.]

#### PIGS, WHEELBARROWS, AND QUEENS.

In GLEANINGS and elsewhere, after an offer of queens at exceptionally high prices, are to be found the following words:

It seems as if it ought not to be necessary to say that no one but a queen-breeder or a large honey-producer should order these high-priced queens; but it is a fact according to our experience that beginners with only a few colonies will order our highest-priced imported queens. Such bee-keepers have no more use for such queens than a pig has for a wheelbarrow.

I never was a pig, so I may not be a competent judge as to the yearnings that animal may have for a wheelbarrow; but I have been a beginner in bee-keeping, and I am not so far from being one now that I can be satisfied to read those words without entering a protest. I am not going to uphold the idea of gouging the queen-breeder or the large honey-producer by making him pay \$25 for a thing as little as a queen-bee, but I do protest that we beginners are not away off in trying to get the best that is to be had. "Beginners with only a few colonies will order our highest-priced imported queens," forsooth. Why shouldn't they? Any scrub stock will do for the beginner with five or six colonies, and then when he gets up to 50 or 100 he should get a best imported queen and have a time working out all his poor stock. Please tell us why it would not be the wise thing to begin with the best and have the best all the time. Wouldn't it be a good deal easier to change the stock with five colonies than with fifty?

Perhaps you will say, "But not every beginner with five colonies increases to fifty. Wait till you know that he will have enough to make it worth while. It may be that he will be satisfied not to go beyond the five colonies." Well, suppose he should never go beyond five. Let us figure a little to determine what he might afford for those five. If he is in an average locality, with only five colonies, and those no better stock than beginners usually have, it would be nothing strange that a change to best imported Italians would in-



crease the harvest of each colony a sufficient number of pounds to amount to one dollar a year. That would be \$5.00 a year; and if he should continue only two years in the business it would be \$10.00. That would pay for a best imported Italian queen, and leave a remainder of \$3.00 to \$5.50. Look at it another way. Suppose a beginner with five colonies pays \$7.00 for a best imported queen. He might be allowed at least three years in which his increased harvest should pay for the queen. That would be \$2.33 a year, or 47 cents a year for each colony. Do you think it would be difficult to reach that increase? Please stop throwing pigs and wheelbarrows as stumbling-blocks in the way of beginners.

Marengo, Ill.

C. C. MILLER.

[I still think my advice is good; but you make one good point when you say it is cheaper to start out with good stock than to get it after the apiary assumes some size. Agreed; but I would still advise the beginner not to get an imported or a high-priced breeder until he has acquired some experience. Let him get good stock by all means; but get untested from some fine breeding-queen. These untested are cheap, and may develop to be as good as the breeder.

Say—you are no spring chicken in the business.—ED.]

#### BEARS IN THE APIARY.

For the past three weeks I have been bothered a great deal by bears in one of my out-apiaries. They have caused me considerable loss in honey, bees, and hives. I lost five colonies entirely, and a good deal of honey from other colonies; but the trouble and expense of watching and protecting the apiary, and at the same time getting rid of the bear, has been the greatest loss. On the night of the 11th I succeeded in wounding one measuring 6 feet 7 inches from tip to tip; so that, on the 12th, I was able to capture him; and on the night of the 19th I was fortunate in killing one measuring 7 feet 11 inches from tip to tip, which I trust will close the chapter for the present.

W. O. VICTOR.

Wharton, Texas, June 21, 1901.

#### THE BONNEY METHOD OF INTRODUCING QUEENS.

J. H. Martin says, on page 80, that he would like to ask Mr. Bonney or any one using his method of introducing queens if he ever had any trouble from the queen killing the bees. In answer I would say that I never have had any such trouble, nor have I ever seen a queen kill workers but in a single instance. Then a virgin queen stung four workers to death in quick succession when the comb which she was on was lifted from the hive. I consider this a freak, as I have never seen any thing like it in all my experience.

I judge from Mr. Martin's statement, that he placed the queen in the cage and then put in the bees one at a time. A queen might possibly attack a single strange bee, but I am inclined to think it would be more of a freak than a regular occurrence. Mr. Pridgen tells

us he sometimes puts in the bees one at a time, and I have done so myself, and there was no quarreling; but I prefer to cage quite a number of bees until they have a sense of loneliness and queenlessness, then place the queen among them, and in no case has the queen or worker shown any disposition to harm the other. I have never lost a queen by this method, and I regard it as the safest of any plan I know unless it is Mr. Alley's method of tobacco smoke, which is, perhaps, equally sure; but I like my plan best, as the bees do not have to remain queenless so long, and there is less danger from robbing; besides, some do not like the smell of tobacco smoke, and I do not like to handle it myself. I hope Martin the Rambler will give this method a thorough test, and let us hear his echo on the subject, through GLEANINGS.

C. T. BONNEY.

#### BIRDS KILLING BEES IN FLORIDA.

In this part of Florida bee-keepers are just recovering from a severe loss of bees. The late storm in April brought thousands of birds which were never known in this portion of Florida before. They were the most destructive bee-enemy ever known here. They would alight on the hives and catch every bee that came out. If a bee chanced to escape to the fields they would capture it. We killed the birds by hundreds. They now have emigrated to parts unknown. The birds were something like our Northern cherry-birds—male, red collar, but no tuft on top of head; female, yellow breast, brown wings.

W. T. MUNDY.

Pt. Washington, Fla., May 10.

#### BETA NAPHTHOL VS. SALICYLIC ACID.

Last spring I fed salicylic acid, but foul brood appeared again in the fall. This spring I sprayed the empty brood-combs with a solution of beta naphthol, using a Faultless sprayer, and also used the same drug to medicate syrup fed. I also kept a piece of naphthaline in each hive, on the back of the bottom-board. My hives under this treatment are practically free from foul brood. See Cowan's "British Bee-keeper's Guide."

#### HIVES FOR NEW ZEALAND.

Although an eight-frame Langstroth hive in the hands of a practical bee-keeper is good, yet in a climate like that of New Zealand, where bees fly all the year round, and we frequently have rough weather in the spring, I am inclined to think that the ten-frame Jumbo would be more suitable here, as it holds more stores, and consequently requires less attention. My experience with bees hived in kerosene-boxes, which are about 14 inches deep and 9×18, is that they make 9 or 10 inches of brood and 3 or 4 of sealed honey above; hence I believe the Jumbo frame more nearly meets the natural requirements of the bees than the Langstroth depth, and the queens would rarely lay in the Dadant shallow extracting-supers above the Jumbo brood-nest.

CHARLES F. ENGLAND.

Foxton, N. Z., Feb. 4.



#### NATIONAL BEE-KEEPERS' ASSOCIATION.

OBJECT:—To promote and protect the interests of its members; to prevent the adulteration of honey.

OFFICERS:—E. R. Root, President, Medina, O.; R. C. Aikin Vice-president, Loveland, Col.; Dr. A. B. Mason, Secretary, 3512 Monroe St., Sta. B, Toledo, O.; Eugene Secor, General Manager, Forest City, Iowa.

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FEES:—Annual membership fee, \$1.00. Remittances may be sent here or to General Manager as above.

It is not true that alfalfa honey is always light. In some localities it is a light amber, and in others it is next thing to water-white. But the flavor, so far as I can find, is always good.

HUTCHINSON is right in preaching "more bees." I find in my travels that the most successful bee-keepers—those who make money—are those who run from 500 to 1000 colonies, and some of them make more clean cash than the ranch and fruit men with ten times the investment.

#### MY LONG TRIP.

By the time this journal reaches our Western readers my trip of some five or six thousand miles on the cars, and some three or four hundred more in a buggy, will be near the end. My note-book and cameras have been kept busy; and as the months go by I'll try to tell you what I have seen and learned.

I find it hard work writing copy on the cars, and trying to edit a bee-journal at long range, even with so good a veteran as A. I. R. at home to read proof and splice out the gaps. Editor Hill has my sincere sympathy.

#### PRICES ON CALIFORNIA SAGE HONEY.

SOUTHERN CALIFORNIA will not have the big crop that was expected earlier in the season. The rain fell short at just the critical time. But some of the buyers and commission merchants are trying to cram the idea into bee-keepers that the yield has "been tremendous," and, in consequence, are making low offerings. A few who need ready money may have to take advantage of the low market; but I am satisfied that prices will advance a little later, as soon as some small lots are sold. But I know of some large lots that will be held till better prices are obtained.

#### THE FUTURE OF IDAHO AS A BEE COUNTRY.

ONE of the paradises of bee-keeping to be in the State of Idaho. I have just passed through thousands and thousands of acres of white clover, red clover, and alfalfa, and yet no bees in sight. Thousands of acres of alfalfa are to be opened up as soon as irrigation is extended. I don't mean to say that there are

no bees in Idaho, for there are a good many, but not nearly what the State will support if what I can see and learn is correct. But no one should locate in Idaho, or anywhere else, until he has investigated for himself, and made a preliminary advance trip; and no one should even then think of going on to the bee-range of some other person already located.

#### THE FOURTH OF JULY AT THE HOME OF THE HONEY-BEES.

THE machinery is still, and everybody has gone except two or three of the faithful ones. Mr. Wardell is in the apiary, and has been almost ever since daylight. He rather wanted some help, but nobody wanted to help on the Fourth. Basswood is in full bloom, and honey is coming in with a rush. Every empty comb on the premises has been gathered up, and, later, every frame containing sheets of foundation, and yet some of the bees are building combs back of the division-board. "Robert" promises to have plenty of sheets of foundation in the frames bright and early to-morrow morning, but he did not want to tackle the work on Independence day.

Well, we are glad that honey has finally come. There is not any more need of feeding at present. Each one of the 540 colonies and nuclei is filling its combs, and the bees all seem to be happy.—A. I. R.

#### BEEES AS FERTILIZERS.

IN our intercourse with the farming class we not infrequently meet people who are almost if not quite hostile to the bee-keeper. They seem to think the bee-keepers' bees have no business trespassing on some one else's land, etc. Many of these people can not be reached through the agricultural press, for they do not read agricultural papers. Some of them, of course, could, and the more professional apicultural writers should, write from time to time suitable articles for these papers. It should be the bee-keepers' business to furnish their local newspapers with such articles, and thus all classes could be reached.

While it can not always be positively proven that honey-bees are important factors in bringing about fertilization of blossoms, yet we do know that in some instances they help materially. If they are a help in some cases, they at least should stand above suspicion of doing harm in other instances.

We know of many fruit-trees—cherry, apple, and pear—standing in the midst of large apiaries, bearing fruit abundantly from year to year. If these trees can fruit under such conditions it certainly can not be said that bees are doing them injury; and if they do not injure the fruit-bloom it is not likely they will other bloom—for instance, the buckwheat.

A neighbor of one of our friends in New York expressed his fear that the bees might injure his buckwheat if he should sow it next to the apiary. It took a great deal of arguing to convince him that there was no such danger.

Honey-bees are by no means the only in-



sects visiting blossoms for the purpose of obtaining honey and pollen. Let us observe once how many different bees and insects visit the sunflower. It would seem that all the pollen and nectar this flower produces would be carried away. Yet every single floweret becomes fertilized, and seeds form with the greatest regularity.

The honey or nectar the blossoms secrete is of no direct use to them—they do not need it for their development. If it were necessary, many plants would have become extinct long ago. For what other reason would a plant continue to produce this nectar year after year if it were not for the very purpose of drawing insects? These and other points may be brought out by the bee-keeper in his local paper to good advantage.

Our friend W. F. Marks, one of the Directors of the National B. K. A., has the following advice to offer in the line above mentioned: "Owing to the hostility or prejudice against bees in many localities, bee-keepers as a class should be urged to step forward and take an active part in the various agricultural, fruit-growing, and kindred organizations when possible to do so. In so doing they can quietly but surely bring about a change for the general good of their pursuit—a matter that should not be neglected or ignored. This need in no way interfere with their duties in and for the bee-keepers' organizations. To this we can only say amen.—F. G.

#### "BUSY" BEES AND LAZY BEES.

AN old veteran bee-keeper from an adjoining county is just here. He is very much put out because of 15 queens he bought of a noted queen-breeder. He says they are "no good," and thinks he has been swindled. When I asked him if they did not keep their hives full of bees he said, "Yes, *too* full." He says they just keep raising brood all the while. Now, the question is, "What *more* does anybody want of a queen?" But his complaint is this: These hives full of bees do not gather any honey of any account; while another colony, whose queen is a daughter of our celebrated clover queen, rolls the honey right in. Now, may be you think we ought to be satisfied with such a testimonial for our stock; but I am not satisfied. I may be after a while, but I am not yet. I can hardly think that one colony overflowing with bees will not get honey, while another, equally or less populous, does get honey. This is a thing we are trying to settle; but I believe we are all more or less in the dark in regard to it. We can tell how many eggs one hen lays compared with another, and I hope our experiment stations or somebody else can soon tell us whether 40,000 bees in one hive gather more honey than 40,000 bees in another hive. The 15 queens mentioned came from one of our most reliable breeders, and one who has also a queen producing bees with tongues of extra length, the daughter of our clover queen. I think our friend may change his mind if he waits till a little later in the season. Mr. Wardell says he does not expect our high-

priced queen to show much difference in honey-gathering till later in the season, about the time of red-clover bloom. Of course, we are drawing on her brood heavily, and shall be doing so all through the season, so she probably will not have as many bees as some of our other colonies.—A. I. R.

#### QUEEN-BREEDERS WHO CAN NOT AFFORD TIME AND MONEY TO WRITE A POSTAL CARD.

THE following appears in the middle of a pleasant letter from a subscriber down in Texas. It was not intended for print, but I think it ought to be printed. I have thought best to withhold the name of the writer, at least for the present:

I ordered some queens from a certain breeder who, by the way, is an advertiser in GLEANINGS, and now nearly two months have passed and no queens have shown up, though I have written him twice. I wrote him the other day to return the money, and can't hear a word. If he doesn't do something I will give you his name soon. He may be sick, or something else bad; but he certainly could let me hear from him some way—drop me a card with the one word "Rheumatism," as one other one did, and I should be better satisfied. But I will await further results and developments.

Ladonia, Texas, July 2, 1901.

Some may urge that perhaps this queen-breeder did not get the money. Of course, the writer does not say he acknowledges having received the money; but he does refuse to answer inquiries. Now, the man who wrote the single word "rheumatism" on a postal card did a little better; but even that is not good business. Whoever advertises any thing in any periodical, should, before he sends the advertisement, provide himself with postal cards and other stationery (perhaps something partly printed to save time), and then he should get some sort of acknowledgment back by the very first mail whenever he receives money. If he can send a queen by next mail I suppose there is not any particular need of writing even a postal card; but if there is going to be a delay, let the customer know at once just about how much delay so he can make his plans accordingly. If, later on, he finds there must be still more delay, write another postal. When you have received money for queens, you are in a measure responsible for every day that passes without sending the queen, and should be, so to speak, "on your good behavior." You are indebted to the customer who sent you the money, and you are under special obligations to be courteous and pleasant, not only because it is manly and Christianlike to do so, but because *your bread and butter* depends on it.

Now, if there is anybody who advertises in this journal, who can not afford a postal card to acknowledge the receipt of money, and another one to explain why delays occur, we do not want his advertisement. The single word "rheumatism," it is true, may be better than nothing, but it is hardly enough—that is, if you have got somebody's money, and are keeping him waiting.

Our friend in the above speaks about asking to have the money returned. Any man who makes any pretensions to being honorable and

square in deal will, of course, return the money the very day he receives orders to do so. Of course, everybody who is complained of should have a hearing; but it will do us all good to have these loose ways of doing business held up before the people. If nothing else will answer, we are ready to do some advertising that we do not get any pay for. If there are any more "Luptoms" among our number we wish to weed them out before they get a going very much.—A. I. R.

#### THE BEE AND FRUIT CASE AT HANFORD, CAL.; DO BEES SPREAD PEAR-BLIGHT?

As announced in our last issue, trouble has been brewing for some months between the fruit-men on the one side and the bee-men on the other at Hanford, in the San Joaquin Valley, Cal. On the part of the first-named, the contention was that the bees, the property of the other parties, were the principal means of spreading the pear-blight, which had been working such awful havoc among the pear orchards in the vicinity mentioned. The bee-men, on the other hand, took the ground that their stock were not carrying the pear-blight; and, even assuming that they might do so, averred that other insects, and birds, as well as the wind, might and could do all the mischief laid to the door of the bees, and that, therefore, the removal of the insects under the direct control of man would not afford the relief sought. The contention waxed warm. Each side called special meetings to discuss the matter. Bitter words as well as threats were used. Some of the more rabid of the fruit-men proposed to use poison to exterminate the bees in case they were not speedily removed by their owners. This only tended to aggravate matters. The bee-men retorted that, if any one were foolish enough to resort to such a procedure, not only killing the bees but endangering the lives of human beings, they would meet them on the issue half way; that they had, as backing, the National Bee-keepers' Association, which had hundreds of dollars to its credit, had fought many cases in court, and had always been successful; that, moreover, it had decisions already on the question of poisoning bees, and that the fruit-men "could drive ahead" if they wished to. The latter maintained that they "had looked up the law," and that they knew what they were about.

It appears that those who indulged the most freely in this war of words were not those who had the largest interests at stake, either in the bees or in the pears; that the large pear-growers as well as the largest bee-keepers were men who indulged in no threats, but who believed that a compromise might be effected between neighbors who were men of fairness as well as men who are willing to listen to reason, and so the sequel proved.

The president of the National Bee-keepers' Association was asked by resident members to make a visit to the scene of the impending trouble; investigate, and take such action as might, after a conference, seem most advisable. Accordingly, on the 18th of June that

officer appeared at Hanford, Cal., being dropped, as it were, into that "nest of hornets" by the redoubtable John H. Martin (Rambler), and J. C. McCubbin, of Reedley, who came with him officially and unofficially to see that no harm was done him; but, be it said, they deemed it advisable to go home that same day, although they did participate in one or two little "skirmishes" on the street. Unfortunately the Rambler didn't have along his invincible umbrella and stovepipe hat; for with such offensive and defensive weapons he would surely have come off victorious. As it was, it was a "draw," and he departed with John C. under his arm.

It appears that the local members of the Association had made a great handle of the coming of the President of the National; of the strength of our organization, how it had never lost a case in court, and that it had secured valuable decisions from the high courts. But as he did not come at the time expected, and days went by, and still he did not come, the fruit-men began to think that this talk was all "bluff," and when he did appear, there seemed to be a feeling on their part that he had come, not to bring peace, but war, and that an organization that would send a "walking delegate" clear from Ohio surely meant business. After a little sparring on both sides, a truce and a compromise began to be talked of. On our side was a special committee appointed by the Central California Bee-keepers' Association, at its last meeting, to meet the representative of the National Bee-keepers' Association; and on the other was N. W. Motheral, Horticultural Commissioner, of Hanford, Cal., who seemed to represent the fruit-men, but whom some jokingly said was the mother of the whole trouble.

When both sides got together it was suggested by one of the fruit-men that, as a compromise, the bees be moved from the vicinity of the pear-trees during the time they were in bloom, and that, after they were out of bloom, and when the alfalfa began to yield nectar, they be returned to take the heavy or main crop. This, it was thought, would give the bee-men time to investigate for themselves, and if, after investigation, it was shown that the claims of the fruit-men were well grounded, afford in the mean time the necessary relief. This was finally agreed to, although it would entail a big expense on the bee-men.

It may be wondered why the latter were willing to listen to a compromise at all. In the first place, they desired to be fair; and in the second place, the fruit-men had the testimony of Prof. M. B. Waite, Assistant Chief of the Division of Vegetable Physiology and Pathology at Washington, D. C. This official takes the position that bees do carry the microbes of pear-blight from flower to flower while the trees are in bloom. In this opinion he appears to be supported by Prof. N. B. Pierce, Pathologist of the Pacific Coast Laboratory, Santa Ana, Cal.

The following letter, directed to N. W. Motheral, Commissioner of Horticulture at Hanford, Cal., from Prof. Pierce, explains the position of the scientists, in a nutshell:



Mr. N. W. Mothral, Horticultural Commissioner,  
Hanford, California.

Dear Sir:—In fulfillment of my former letter, and in reply to your request, I herewith give the main facts upon which are based the claim that bees take an active part in spreading the disease of trees variously known as pear-blight, twig-blight, fire-blight, etc.

1. Pear-blight is a bacterial disease which affects pear, apple, crabapple, quince, and related trees. It is induced through the action of a specific micro-organism belonging to the bacteria, and known as *Bacillus amylovorus* (Burrill), de Toni.

These facts have been demonstrated by many scientific workers by careful inoculation, experiments conducted with pure cultures of the bacillus. The cause of the disease has therefore been well known for many years.

2. The identity of the blight of pear-trees in the Clow and Taylor orchards near Hanford (these particular orchards are cited only for the sake of accuracy, as there are many others affected) with true eastern pear-blight has been demonstrated at this laboratory. *Bacillus amylovorus* was isolated in pure culture by the plate process from blighted branches from Mr. Clow's trees, and a young and thrifty pear-tree was inoculated, and died to within a few inches of the ground of true pear-blight. A control tree treated the same way as the inoculated tree, except that the bacillus was not introduced, remained perfectly healthy.

Mr. M. B. Waite, Assistant Chief of this Division of the Department, has kindly supplied the following additional facts bearing on this matter:

3. "The occurrence of the blight on the blossoms in great quantities, and the great rapidity with which the disease spreads from flower to flower, indicates a normal and very effective method of distribution."

4. "The germs were found growing freely in the nectar of the blossoms."

5. "Bees were seen repeatedly visiting the infected flowers, and some were caught taking infected nectar, and, by means of plate cultures, the pear-blight germs were isolated from their mouth parts."

6. "By covering parts of the trees with sacks of various kinds of material, and then artificially infecting certain flowers on the tree, the blight was observed to spread very freely over the uninfected and uncovered blossoms, but was entirely absent in the blossoms covered by mosquito netting."

7. "Blossoms were infected, and at once covered with sacks, and the blight, in such cases, was retained in the infected blossoms."

8. "Pear-blight germs died very soon after being dried up, and lived for only a brief period on exposure to weather conditions out of doors, hence they can not live in dust, and be blown around to any great extent by the wind."

9. "Pear-blight virus, particularly that which occurs on blossoms, is a very sticky substance, and is readily carried by insects, birds, or other animals, but can not be blown by the wind."

This brief presentation will, I believe, furnish your board with the main facts needed to show the connection existing between the visits of bees to pear-flowers and the spread of pear-blight.

Sincerely yours, NEWTON B. PIERCE,  
Pathologist in Charge.

April 23, 1901.

Prof. Pierce happened to be in the city at the time, and in an interview which we had with him he gave utterance to substantially the statements as are given above. If any thing, his verbal statement incriminating the bees was even stronger. So far as I could judge, he seemed to be a competent scientist, and a fair-minded gentleman; but, unconsciously, he is prejudiced, I think, in favor of the pear-men, with whom he has come much in contact of late. I asked him if it were not true that wild bees, insects, and birds, over which man has no control, could do all the mischief ascribed to the bees. He admitted that this was possible but not probable. Did he not think that bees were valuable as fertilizers of the blossoms, especially of those of the Bartlett pear? He thought they were. Well, did not this service of the bee, year in

and year out, more than counterbalance the alleged mischief done by them in the occasional year when pear-blight was so prevalent? He could not say, although he was of the opinion that, by a certain alteration of varieties, the services of the bee might be dispensed with entirely; but of this he was not sure.

From Prof. Waite's statement it would appear (to express it in common parlance) that the bees have been caught "red-handed," bearing the marks of the alleged criminal act. If I understood Prof. Pierce he had not found the bacteria of pear-blight on the tongues of the bees, nor had he himself seen the microbes in the nectar. If this be true, we have, as the only real incriminating chain of evidence, the statement of Prof. Waite. Without detracting in the least from the skill of the professor, it is proper to remark that even the best of scientific men make mistakes, and we as bee-keepers can not accept the unsupported statement of Prof. Waite without further investigation by some of our men equally competent and fair.

This is a nice question, as a lawyer would say, and we need to go at it carefully and candidly to get at the truth, cut where it may.

There is some evidence that goes to show that Prof. Waite is mistaken. For instance, there are young pear-trees, acres and acres of them, that have never been in bloom, and yet these young trees are blighted to death. How in the name of reason did the bees carry blight to these trees when it is apparent that they never went near them? And then there are little shoots that have pushed up from the ground since the big trees were in flower, and yet these shoots are blighted like the rest. Assuming, for argument's sake, that bees may carry the blight on old trees, we must admit that there is some agency, possibly the wind, Prof. Waite to the contrary, that carries the destructive microbe to the young shoots and the young trees. There are some things that are not explained yet.

Again, I believe we have the right to insist, for the present, until we have more corroborative evidence that wild bees, other insects, and birds, over which man has no control, may be able to spread the blight just as much as the bees under the control of man. For example, this illustration was used: If a barrel full of water has two plugs in it near the bottom, the larger plug, represented by the tame bees, and the other plug (the small one) by insects, birds, and wild bees, will not the small plug exhaust the barrel just as surely as the large one? If this be true the removal of the bees controlled by man would not bring the relief expected, by a long way.

In conclusion, let me say that I visited the worst-affected large pear-orchards in the vicinity of Hanford, Cal. The large pear-growers were fair, intelligent men. While they thought the bees were to blame, they also thought the pear-men had some responsibility in the matter.

I visited one orchard of 120 acres, and every tree was badly blighted, and no mistake; but in this orchard we found the badly blighted little shoots I have referred to.



Behold the Lamb of God that taketh away the sin of the world.—JOHN 1:21.

We have not a high priest that can not be touched with the feeling of our infirmities, but was in all points tempted like as we are, yet without sin.—HEB. 4:15.

More than twenty-five years ago, before I began to write or talk for Christ Jesus—yes, at a time when I knew not the Lamb of God that taketh away the sin of the world, I stood with a companion looking out into the street. Nobody was near to hear our conversation. A remark was made to me to the effect that even the poor dumb brutes and domestic animals in the street were more worthy of confidence than my own poor sinful self. They were not responsible before God and before man for their actions; but *I*, who professed to be a man, and a man of integrity, really belonged on a scale lower than that of the brutes. This was spoken in a sort of sarcasm. And, by the way, it is rather strange, but none the less true, that partners in crime sometimes speak the truth plainly. I have seen several men together in a drunken orgie, when one of them would speak out and tell the other what a beast he was making of himself by his continued intemperance; yes, and after winding up what might be considered a pretty good plain temperance lecture to the poor sot, the one who told this plain truth would finish by saying, "Now, boys, is it not true, every word I said?" When they would assent with grave-looking faces, the speaker would add, "Come, let's take another drink."

I do not mean to tell you, friends, that I was a *drinking* man at this time—at least, that was not my particular sin. When my companion uttered this plain scathing truth I bowed my head in shame, for I knew it was true. A spark of manhood, however, did prompt me to make a feeble resolution to do better, and I think I added something like this; and I said it, too, with honest, sober sadness: "If what you say is true, I think I had better turn over a new leaf right here on the spot, and be a little more of a man than I have been."

I remember I had considerable of a dogged determination in my heart just then to show my tormentor, for the time being, that I could and *would* be different in the future. At this point I received a still more cutting piece of sarcasm, and that from one who had not labored very hard in times past to make me better. The words were something like this:

"Turn over a new leaf, and do differently from what you have been doing? No, you won't. You will keep right on just as it has been for months and years past."

When I came to think it over in my sober moments, and remembered the resolutions I had made but never kept, I was forced to acknowledge there was very little probability, as things were going, that I would ever be any different or any better. May God help the

poor sinner who has lost hope because he has struggled in vain so many times to break asunder Satan's shackles. Why do I bring this thing up from so long ago? Well, I think it was a dream that reminded me of the occurrence. I was away back in the old times; but in the dream I did not bow my head in shame, in submission, and in despair. Do you know why I didn't? Because, since that time I have had more than twenty-five years' experience in breathing that little prayer I have told you of so often, "Lord, help." When my companion taunted me with the fact that I was not only away down in conscience and rectitude, but that I was helpless and *lost*, in my dream, I forgot that reference to my helpless and lost condition, and turned from my tormentor—yes, I turned from all the world with all its trials and temptations. I turned toward that "Lamb of God," as we have it in our text, and implored help. I said, "Lord, I am weak and sinful. My *record* is bad. I have made resolutions again and again; but Satan has brushed them away as if they were cobwebs. I have nothing to plead in the way of my own merit. I am a lost, helpless sinner without the help of thy strong arm. Lord, help and save."

In an instant I felt my feet planted on the solid rock. Poor and unworthy as I was, I was not alone. In my *dream* the wondrous truth burst upon me, of the great and inestimable privilege it is to have Christ Jesus for a friend and a helper! It seemed to me then as if nothing this world could furnish—no, not even death itself—had any terrors, for Jesus promises to be not only with us through life, but he promises to be our pilot and guide through the dark valley of death.

Those who have read GLEANINGS very long know something about this turning-point in my life. In mechanical work men often go to great expense to get something solid and substantial to tie to. When planting heavy machinery they go away down into the ground and build piles of heavy and expensive masonry, to get something solid. When erecting buildings, or any sort of structure, men look about for something solid on which to fasten their ropes. Sometimes a large tree holds a guy rope. If this tree, or whatever it is, should give way, loss of property and loss of life might ensue. Old experienced hands in building bridges and other great structures will never be satisfied unless they have something *solid* and *substantial*. During that old life I had no substantial anchor. Worst of all, I had lost confidence in undertaking to break away, because I had failed, miserably failed, every time. I did not know in that old life, that this whole wide universe offered any thing solid and secure when the poor weak human will was found to be inefficient. Yes, let me say again in my *waking* moments, as I said in my *dream*, it is a great and wonderful privilege to any human being to feel that he is permitted to reach out and grasp hold of the strong arm of Him who created the world. Nay, more than that: when there is not time, and you have not the strength to reach out, just breathe that little prayer, and He whom



even the winds and waves obeyed has promised to look after and care for you. I remember hearing of a certain old colored man who used to say, when greatly tempted, "Lord, your property is in danger." When asked how he dared pray with such assurance, he said that for many years he had belonged to the Lord, and therefore he had a *right* to consider himself the Lord's property.

Now, that dream I have alluded to might have been forgotten and passed by, but a strange thing brought it to mind. We are now having exceedingly hot and sultry weather, for to-day is July 1. Well, along with the hot weather we are getting out our easy-chairs, hammocks, cushions, etc., so that we can take rest and enjoyment in the shade. Among other things, Mrs. Root showed me a beautiful soft pillow. It is covered with silk, and on the silk is an inscription. Some good lady away off in California worked it out in fancy needlework and embroidery, and sent it to me for a present. Here are the words:

Lord, help! this is my favorite prayer  
In time of trouble and of care.  
I may not all the wants disclose;  
But these my loving Father knows;  
But help I need, and up to heaven  
I lift my prayer and help is given.

You will notice I have two texts at the head of my talk. You might infer from the above that, during the twenty-five years that are past, I had triumphed very easily over every temptation. Please do not understand me so. It is true I have been ultimately delivered, and have come safely through all trials; but I have had my sore conflicts like the rest of humanity. Again and again have I exhorted others to let go of the follies and trials of this world, and turn to the Lamb of God, and yet in just a few hours afterward I have been myself, as it were, struggling in the Slough of Despond, as we have it in Pilgrim's Progress; and many times I have thought, "Well, it is a long time since Satan has had hold of me along that line. Very likely he has met with so little success that he has given up the job and concluded he can accomplish more by prowling around somewhere else;" but again and again (sometimes in just a few hours) I have found that I am a good deal the same chap that I have been all through these years. I hope I am climbing slowly away from earth, and up toward heaven. But earthly things hang to me with a strong grip, even yet. Sometimes I wonder at these conflicts and skirmishes. Yes, sometimes I am really appalled by the sin that still lurks in my own heart. Let me digress a little.

During these twenty-five years or more, I have exhorted many to turn to the Lamb of God that taketh away the sin of the world. Sometimes I have been asked to settle difficulties, and have been chosen arbitrator. I have had one recent experience. The parties are both friends of mine, and they have been for years friends to each other. They have been mutually helpful to each other, doing business in the way of buying and selling honey to the amount of hundreds if not thousands of dollars. They are both, I think, professing Christians. Of course, each was to present the

matter from his own standpoint. In the first place, they had trusted each other *too* much. Things that ought to have been down in black and white had been allowed for years to go without a settlement. We have no right to do this, any of us. After the disagreement, each questioned the other's sincerity and Christianity. I plead with both of them to consider the other as still his brother, and that they should fix the matter up and go on doing business together like two brothers. But Satan had got into their hearts (I hope both will forgive me for speaking thus plainly), and I fear I succeeded very poorly. I have seen many cases of this kind. A man goes on at great length to tell me of the inconsistency and mistakes of his neighbor. When I remind him of how many years they got along pleasantly together, my informant says, "Yes, that is true; but something has got into him lately. He did not use to be so mean and ugly."

I reply, "Yes, my friend, something *has* got into his heart. Satan has got hold of him. Are you not sorry for this neighbor of yours? Do you not pity him?"

The reply, however, is something very often like this: "No, I do not pity him a bit. I do not care how much trouble he has. I should like to punch his head this minute."

Sometimes I have tried to make peace between husband and wife. I have told you about it on these pages. I have begged and implored each of the two parties to remember the good qualities of the dear partner. I have urged each one to pray that God might loosen the hold the evil one had got on the heart of the other. Sometimes I have said, "Why, Mr. A, can you not look at this thing as you would if your wife had suffered some misfortune? or as if it were sickness that ailed her? Let us just suppose for a minute that she is unfortunate and to be pitied. Perhaps through no particular fault of her own, Satan has got into her heart. Can you not help restore her to her old self by being kind and gentle? Will you not try very hard not to fan into a flame this thing that is only just started, by any imprudent or foolish act of your own? Never mind who is right or who is wrong. Never mind if she *is* unreasonable, yes, and even exasperating. 'A soft answer turneth away wrath.' Disarm her by kindness and gentleness, and show a spirit just the very opposite from the one *she* exhibits."

Sometimes my exhortations bear good fruit; but too often the husband declares he is going to pay her back in the same coin she gives him. And then comes a separation, even after the two have brought up a family of children.

Sometimes a row is started because one man calls another one a liar. Again and again I have tried to persuade both parties that this was not an excuse for a "fight."

I have sometimes said, "Why, if he told the truth, and you *are* a liar, you ought to thank him for telling you of your faults. And then you ought to go to work right earnestly to break away from such sinful habits. If you are not a liar, denying the charge in his

present frame of mind would not convince him at all. I just quietly keep telling the truth so persistently that nobody will believe what he says."

I have sometimes *almost* wished somebody would call *me* a liar so that I could demonstrate to those around how easy a thing it is to look pleasant and smiling under such trials, rather than to strike back, or even reply by like unkind words.

I fear I was getting to be unconsciously proud of the example I was setting in respect to such things. Howard suggested to his mother that may be God punished "grandpa" for boasting. I do not know but the dear Savior has just been punishing me for being self-confident. One evening I had been reading until I felt tired and sleepy. I said I would have to go right to bed, for I could hardly hold my eyes open a minute longer; but in less time than you can think I was so wide-awake that hours passed before I could quiet the tumult that rankled within, enough to even *think* of sleep. Some little incident occurred. A discussion as to "who was to blame," sprang up before I knew it. It was a little misunderstanding over a matter of no importance to anybody. It is true, something happened with some of my utensils that I can not understand even yet; but there was no reason in the world why this trifling displacement of some of my property should even start a discussion. It lasted hardly a minute by the clock. During that minute the blood was coursing to my very fingers' ends. The warning note of danger, my little prayer, kept sounding louder and louder, but I was *sorely tempted* to have out *first* my say, and listen to the warning *afterward*. But I had grace enough to stop. But, even though I uttered no word, that did not end it. A fierce conflict was going on in my soul, and that warped my better judgment and drowned out my sense and reason. I prayed for peace and tranquility; but for some reason or other the dear Savior did not see fit to send it. I dare not put on paper the vicious and evil thoughts that trooped through my mind as I sat at my accustomed desk trying to read the paper before my face. Some of my friends will say that it will hurt me, and perhaps spoil my influence, to make even such a confession as I have made. But, dear friends, I do not believe I shall suffer in the estimation of good people who know what it is to be sorely tempted, even as I am and have been tempted. I knew I was not myself, and for a long time it seemed as if there was little I could do to help matters except to keep still and pray. We have a picture in the Bible of the way in which Satan was allowed to persecute and try Job. I have wondered since if it can be true that the Lord permitted Satan to gain just enough access to my heart to give me a glimpse (or a sample) of the machinery he employs in breaking up homes and making the nearest and dearest friends the bitterest enemies. I am sure one of Satan's favorite plans to get a foothold is to start foolish discussions and disputes. I once visited a family where every thing was lovely outside and indoors except

the habit of contradicting each other. Somebody would make a statement in answer to a question that I innocently asked. Almost before my question was answered, some other member of the family would say, "It's no such thing." Then a third one would put in, "You are neither of you right. I was there myself yesterday." And thus it kept going until it seemed as if they must come to blows when there were no visitors around. There is an old adage that comes in very pat on such occasions—"Least said, soonest mended."

We are all of us startled almost every day by the newspaper accounts of how some man shot his wife and then committed suicide. Humanitarians are becoming appalled at the frequency of such tragedies. I have watched all such statements in order to see what started the trouble. A great many times we are told a man and his wife had disagreed a good deal, and had had frequent jangles, but nobody thought it would amount to anything more than just talk. I have suspected, however, that Satan has learned a new trick. He is always trying to start a fuss between the best friends, even between parties who are united by the nearest and dearest ties of relationship God ever formed between two persons—man and wife. He gets into the heart of one of them, and suggests a harsh and unfeeling speech. Then quicker than an electric flash he goes into the heart of the other, and suggests an appropriate (?) keen, cutting reply. Thus he goes back and forth until good breeding and good sense prompt either one or both parties to stop. A Christian spirit and a love for Christ Jesus in the heart of each one of the two ought to extinguish such sudden flames at the very outset. May God help me, as I utter these words, to practice *better* what I preach.

Some kind sympathetic friend will suggest to me right here that I was overworked and worn out. Perhaps my nerves were overwrought by the hot weather or something of the kind. I am glad to say that such excuses for me have no weight. I never felt stronger or healthier in my life than I do now. I have been for weeks living on a diet mostly of strawberries and bread and butter. My drink has been distilled water, and I am *just as well as can be*. I had a good half-hour nap on the afternoon in question, and I was in full possession of all of my powers of mind and body. I think, too, I was reasonably filled with love toward Christ Jesus and love toward humanity. Satan got into my heart, notwithstanding, in just a few brief seconds, and touched hidden springs of my life and my being (that I never knew of before) in that brief time, so that I felt it the next day. Some time last winter the sewage-pipe to our kitchen sink got out of order. I looked at it, and thought I could fix it in about a minute. But when that was done, something else needed fixing, and I kept on pulling it to pieces until I had worked hard for over an hour. Had I known how many repairs were needed, I would have sent for a plumber; but after I got started I did not like to give up beat on the job. I came out ahead and made it all right; but I



had to work in such a cramped position it made my muscles and joints ache for several hours afterward. Next day I wondered what made me feel so sore all over. I did not know but I was going to be sick, until I remembered about cramping and twisting myself while working at that pipe.

Now, this encounter that I have been telling you about, with the powers of evil, affected my nerves and my spirituality more or less all the next day. Every little while I would be wondering what was the matter with me, and then I would reflect. Bunyan gives us a very good picture of such a conflict, in Pilgrim's Progress, where Christian had a hand-to-hand conflict with Apollyon. The latter was much the larger, and poor Christian was no match at all for him in point of strength. Reason and common sense would have said that Apollyon might crush him as one might crush a fly. Well, the loving Father looked on, and he always looks on, and will never let a faithful "soldier of the cross" be overcome nor entirely overpowered. We are tempted to have but little charity for the actors in these suicides and murders. We might say, "Let them get out of the world so good people can have peace." But, dear friends, this remark does not seem to work. Even though a good many are gotten out of the way by this process, the thing seems to grow. In fact, there seems to be a good deal of reason for taking the stand that these unfortunate people are not *altogether* to blame. Satan had got hold of them; and sometimes a man or woman in an unguarded hour lets Satan get a start. We frequently see the remark in the papers something like this: "This man had been such an exemplary person all his life that no reason can be given for the strange act but temporary insanity." Let us be warned and prepared beforehand for these very cases of temporary insanity that are getting to be so frequent. Is not a great deal of it only a new scheme started by the evil one?

In the latter of the two texts, we are told that even the dear Savior himself was in all points tempted like as we are; and would it be any thing very strange if he in his great love should think best to give even his followers like glimpses of great temptation, that they might be better able to preach the gospel, and warn mankind of the evils that Satan brings to pass? We read in the first chapter of James, verses 2, 3:

My brethren, count it all joy when ye fall into divers temptations; knowing this, that the trying of your faith worketh patience.

In thinking the matter over I am forced to believe that a foolish pride is at the bottom of many of these troubles. We are not humble enough—not meek enough, if you choose. "Blessed are the meek, for they shall inherit the earth." Sometimes people think I have not pride *enough*. When I was prowling around in the Florida woods in the middle of the night I needed more of a certain kind of pride; but in some other ways I am often tempted to be proud and overbearing. A few days ago I dictated something to one of our typewriter clerks. When I read the letter af-

terward I told him he must have omitted a very important part of it. The conversation was something like this:

"You may have meant to put in something, Mr. Root, but you must have forgotten it, for I wrote down every word you said."

Now, I knew certain reasons why I could not have dictated just what he wrote, that he did not know as well as I did. I said quietly, "Hunt up your notes and see if you did not omit two or three lines in copying your notes on the typewriter." He replied:

"It isn't any use to hunt up the notes, for I wrote down every thing you said."

Now, the young man was foolish in being so positive. I suppose most of us are often foolish in being over-positive. I felt sure I was right, but I thought I would not say any thing for fear I might betray my—was it not pride? He should have remembered the years of experience I have had in such matters. He did not know that it has long been my practice to watch the pencil of the clerk as he makes his crooked marks, to see just when he has finished the sentence as I dictate. If a line is dropped I am pretty sure to notice it by the motion of the pencil. I did not say any thing more, but stood by him while he hunted up his notes and commenced to read his record. There was quite a change in his countenance when he said:

"Oh! I beg pardon. I *did* leave out something after all."

I mention this as an illustration, not because I wish to reflect severely on the young man. We meet the same thing, most of us, thousands of times. The hired girl tells you very pertly you did not say a word about a part of the work you explained quite at length. What shall be done about it? Why, keep cool, and do not get proud and overbearing, even if you are boss or mistress, and even if you have grown gray in watching to see how these little mistakes come about. Take a humble place in the affairs of life. Sit at the feet of the dear Savior, and learn of him. O God, help me to practice *all the time* the precepts I am now trying to give to others. I know how natural it is to go to great pains, and to great lengths, to prove we are right. In the case I have mentioned, I knew the pencil-marks of my young friend would prove to him that I knew what I was talking about. But in ordinary talk or in ordinary disputes we do not often have such proof in black and white of exactly what we did say.

Of late it has been a difficult question to decide whether certain ones are insane or simply ugly. Judges are appointed to decide the matter. Now, if I were a judge, and if I were to settle the question as to whether some one in a quarrel was getting out of his head or not, I would test him by a scripture text. When he got to going on about his neighbor, and began telling his side of the story, of how he had been used, I would quietly ask him to hold on just a minute. Then I would say:

"My friend, you know the Bible says, 'Love ye your enemies; do good to them that hate you; bless them that curse you, and pray for them that despitefully use you.' Now,

what do you think of the above words? Do they not sound more like the words of the heavenly Father to his contrary children than like words that ever came from any human being?"

If the person assents that these *are* probably the words of *God*, and that they are grand and glorious words to sinful humanity, I should say right away that the man is not crazy at all. He is perfectly sound in mind. If, however, these beautiful texts should make him angry, and even uglier and more vindictive than he was before, then I should say, "That man has a touch of insanity. He will be crazy if he pushes ahead in this quarrel or other like quarrels."

My prediction in this way has several times come true. There is a kind of insanity that prompts these crimes we read about, and this insanity is Satan's work. *He* is at the bottom of every bit of it. Now, dear brothers and sisters, if we believe this, if we recognize that Satan is *really* going about as a roaring lion, just as the Bible says, then let us be careful. Whenever the time comes that you can not kneel down at night and pray honestly for every one who has provoked you or even done you harm during the day, Satan is getting into your heart; and may God help you to say, "Get thee behind me, Satan."



#### FLORIDA TRAVELS, CONTINUED.

My next point from Sanford was Sorrento. There is a railway off in this direction; but since the big freeze the trains run only twice a week. As my destination was only about twenty miles, we made the trip with a horse and buggy. On the way we had to cross a river. As there is not travel enough to pay for an expensive bridge, two counties unite and keep a man at the crossing, with a ferry-boat. He is paid a salary, so the traveler has nothing to pay. At a moment's warning, day or night, he is carried safely over the stream. It seemed to me as if it must be a pretty big job to push the boat over when loaded with horses and vehicles. But the ferryman's daughter, scarcely a dozen years old, said she had ferried people over frequently during her father's absence. Of course, there is not very much current to this river. In fact, it is like a good many of the Florida rivers—only a narrow stream connecting one lake with another one.

At Sorrento I stopped at R. M. McColley's. Mr. M. is, like many other bee-keepers, a sort of odd genius. He has a home in Ohio, not very far from Medina, and it is a very nice comfortable home too; but on account of his health he has for several years spent his winters in Florida. At the present time he has also a very nice place in Florida. In fact, he has a steam-engine to pump water and saw wood, and quite a lot of agricultural imple-

ments; and when GLEANINGS described the home-made windmills a little while ago he had to make such a mill. It was my privilege there to pick luscious tangerines right from the trees; in fact, he has succeeded in growing some very fine fruit almost without protection.

This matter of having a home in Florida and another in the North, and migrating back and forth as the birds do, is one that has been considered a good deal. But there is a serious drawback to it. When you get every thing fixed up nice, and wish to go away, you must either close up every thing, and hope nobody will break into the house and steal while you are gone, or you must leave hired help to look after things and take care of it; and the latter is sometimes more unsatisfactory than the former. Mr. and Mrs. McColley were telling me how they found things in Ohio after they had trusted to hired help or renters for several years. I believe the tenants did not get quite to the point of keeping "pigs in the parlor," but they came very near it, and our two friends are now back in Ohio fixing up their home again, growing crops, and getting things in shape as well as they can, as they were before they went to Florida.

In the afternoon I was driven over to Mount Dora, where I met our good friend Longstreet, who was one of our veteran bee-keepers. He lived for many years in York State, not far from Doolittle. He went to Florida on account of poor health, and at the time of my visit he was feeling very poorly on account of the grip and some other troubles that had set in. I was almost frightened to see him several times make such an effort to get his breath. He said he would feel better to get out in the sunshine in his beautiful yard among the orange-trees; and after a while he recovered so as to talk about the bees, tropical gardening, etc., quite like his old self. I feared when I bade him good-by he was not going to live long; but still I was somewhat surprised to learn that he died shortly after my visit.

As my visit was on the day of the semi-weekly train, I decided to wait for it in order to ride six miles to Tavares. Well, this train that runs only twice a week was delayed *six hours*. Of course, I could have made the trip on foot much easier than to wait away along into the night; but the operator kept telling us all the while the train would be along in a short time. Well, when we got to Tavares (after waiting six hours to get six miles) the station had been burned down, and I did not recognize the place, so I was carried on past my stopping-place. The conductor declared that he called out "Travares;" but so many passengers said with me they did not hear any thing of the kind, he finally relented. I was carried on to a beautiful little town called Eustis. The conductor, of course, gave me free transportation there and back. At Eustis I found a bee-keeper, and for the first time in my life saw redbud-trees in full bloom; and let me tell you redbud is one of the handsomest ornamental trees to be found anywhere in the world. The sight of a tree in full bloom, in a dooryard, called forth exclaima-



tions of surprise; and I wonder now that the tree is not grown more as an ornamental shrub. We tried it years ago here in Medina, but did not succeed in getting it to bloom. From Tavares I went to Oakland, on the shores of Lake Apopka.

We hear people boast, many times, that this, that, or the other locality is entirely free from grip, and that people never have grip in that region. These statements often come from people who have real estate to sell. I think they have some grip in Florida. When I was waiting for the train at Mount Dora, within about fifteen minutes I began to feel my breathing-apparatus clogging up. I put on my overcoat, and bundled up unpleasantly warm; but I had such a cold by the time I reached Oakland I was pretty nearly down sick. In studying the matter over I got an idea that plenty of heat applied in the right way to the seat of the mischief would help very much to get rid of the grip, or, if you choose, any sudden severe attack of cold. My cousin's folks had a fireplace, and a good lot of pitch-pine wood to make a nice hot fire. Well, I got the heat from that open fireplace to strike right square on my bald head, and I kept on with the treatment until it really seemed as if my brains would get to boiling—that is, if there were any brains down through my thick skull—and I just roasted that cold clear out of my head and throat. I presume it was something on the same principle as the cabinets or vapor baths that are advertised so extensively. It did the business; and after resting two days I started on to Orlando, comparatively well. At this place I was nicely entertained by Mr. A. E. Woodward, a veteran bee-keeper from York State, who spends his winters in Florida.

Daytona has often been called the handsomest town in Florida; but Orlando is certainly equal to Daytona, and I do not know but it is a little ahead. It is situated in the midst of a group of beautiful pure soft-water lakes. If I am correct, there are four or five around in the suburbs of the town. The finest pineapple-shed I saw in the whole State was at Orlando. It was managed by Mr. T. J. Arnold, of the Little Gem Pinery. He has taken from half an acre in two years fruit and slips to the amount of \$2600. The slips bring him 12 cents each, and are mostly engaged in advance. He had then an acre and a half under shed. In the vicinity of Orlando there are perhaps 200 acres of pineapple-sheds. It costs about \$2500 to shed, set, fertilize, gather, and market the first crop, per acre.

Orlando has five nice churches, a fine bank, very pleasant hotels, and boarding-houses. The latter, where I stopped with Mr. Woodward, has rates of only \$7.00 a week, and every thing was in excellent trim. There are beautiful stores, orange-groves covered with bloom all around the town. Orlando is said to be on the highest ridge in the State. The land is what is called "pine land" for many miles about the town. Strawberries and all kinds of vegetables are in abundance the year round. Friend Woodward, during the summer time, lives at Grooms, N. Y.

## Tobacco.

TOBACCO—IS IT A GOOD THING OR A BAD THING?

The Philadelphia *Farm Journal*, that bright little sheet that you can get (in clubs) five years for \$1.00, hits the spot once in a while. It says:

There is a clashing of interests in Connecticut quite remarkable. A law of the State provides that the children in the public schools shall be taught that tobacco is a poison which no human being should ever take into his system. While Connecticut is spending money on tobacco culture, she is teaching her children that the growth and use of tobacco is a wicked sort of business. The moral inconsistency of the situation is easily grasped by outsiders at least. The situation is an odd one, but it is not likely that Connecticut will be extricated from it. The State will continue to grow tobacco, and the depravity will probably continue to be taught to the rising generation.

I would suggest that the teachers and professors of Connecticut hold a joint convention with the agricultural papers and moneyed men, and discuss the question, and try to have it settled as to who is right and who is wrong. Or they might put it this way: Which is of more importance, the health and moral growth of our boys, or the tobacco business, together with the money invested in the traffic? You know we had some years ago a joint convention of the bee-keepers and fruit-growers of Michigan, and good came of it. Now, Connecticut might have a convention in regard to a matter of a thousand times more importance than either fruit or bees, and all the other States and *all the rest of the world* might look on with profit.

### THE HOME CIRCLE.

The above is the title of a department in the *American Bee Journal*, conducted by our good friend Prof. Cook. It rejoices my heart to read friend Cook's exhortations for righteousness, temperance, and purity; and it rejoices my heart again to see the bee-journals of our land standing out so boldly and bravely against tobacco and intoxicants.

In the issue for June 13 we find the following from Prof. Cook in regard to tobacco:

Over 100 of our college folks—almost half of us—went to Los Angeles last Saturday to attend the Inter-collegiate Oratorical Contest, and the second contest of three arranged with one of the colleges to decide who were champions in base-ball. I was proud, as our fellows won the trophies in the ball game, as they had won in the first, with a great score of 15 to 2. I was still more proud as we achieved victory in the oratorical contest. But I was most proud of the gentlemanly character of our students. One way this was shown, was in the entire absence of smoking among our fellows. The others smoked. We did not. I rejoice that we have no smoking at our college. I wish tobacco were eschewed in all our homes. Our friend A. I. Root, in "Our Homes," has done splendid service in urging against this habit. I wish I could be like happy in these "Home Circle" columns. To the hundreds of students that I have taught physiology, I have always spoken, as best I might, against all use of tobacco.

The worst count that perhaps can be brought against this arch enemy of the well-being of our people, and especially of our youth, is the tendency of the habit to make its patrons thoughtless—regardless of the comfort of others, and thus to destroy the gentlemanly instinct among us. How often in public places our ladies must endure the poisonous fumes from cigar or pipe! Only a few days ago I was pre-

siding at a large picnic gathering, where speaking was going on, when some ladies appealed to me to relieve them from just such an annoyance. I have had to do this unpleasant duty over and over again. Can people acquire the tobacco habit, and preserve their gentlemanly instinct, all unimpaired?

There is one special point in the above that is worth noting. In any contest requiring the fullest development, both of nerves and muscles, and especially alertness as well as strength, the young man who does not use tobacco will, as a rule, come out ahead; expert cyclists learned this a long time ago; and in every department of business where a clear head and a cool ripe judgment are required, the boy or man who lets stimulants alone has the advantage. Long live the Home Circle in the *American Bee Journal*; and may Prof. Cook be spared for many years to conduct it.

#### TRAP LANTERNS, ETC.—SEE PAGE 566, JULY 1.

A communication from Prof. J. M. Stedman, Entomologist at the Experiment Station, Columbia, Mo., is just at hand, severely criticising Mr. Haseltine, the inventor of the trap lantern, for his unfair way of using Mr. Stedman's name to push his invention. We have not room here for giving the whole paper, but we make the following extracts from special newspaper bulletin No. 16, June 26:

It should be distinctly understood that the moth-catchers can not in any sense of the word take the place of sprays, in a general way. While the moth-catcher is a good thing for certain very restricted insects at a certain very restricted time in the proper season of the year, and while it is true that sprays are to a certain extent unsatisfactory for certain insects, yet, on the whole, the spray may be relied upon, even though used by inexperienced persons; while the moth-catcher can not be relied upon without a thorough knowledge of the exact time it should be used for each special case.

We can say that the moth-catcher is the best thing that can be used in large fields for the corn-worm moth, for the fruit-leaf roller, for the pickle-worm moth, and for the June or May beetle. Let it be definitely understood, then, that we recommend the moth-catcher for no other insects than those named; and that for the tent caterpillar, the army-worm, and the cut-worm, there are other methods of fighting these insects that are much better.

Taken as a whole, then, the use of moth-catchers by the general public will do more harm than good.

J. M. STEDMAN,  
Entomologist of the Experiment Station,  
Columbia, Mo.

June 26.

Permit me to add further that we have purchased one of the largest-sized Haseltine moth-traps. The price is excessive, and there is no reason in the world why *any one* (if he wants to) should not use a lamp over a tub of water, with pieces of tin or cheap looking-glasses arranged so the insects will bump against the mirrors and fall into the water.

#### GETTING MONEY IN SOME EASIER AND QUICKER WAY THAN BY DAILY TOIL.

I have long been thinking of saying something about this matter; but the *Philadelphia Farm Journal* has said so much better exactly what I would say, I take the liberty of copying the following. The italics are mine:

Now, what shall we say about the great Wall Street stock gamble, which culminated in May in one of the greatest shearing of the innocent lambs that has ever

taken place: Tens of thousands of people all over the country were drawn into the maelstrom of speculation, and most of them lost money. A few won more than they lost. These we hear of; but of the many that lost, little is said. They keep quiet about it, though sooner or later the bankrupt court will know what has happened. If people who are tempted to speculate only knew that, whether they win or lose in the gamble, they receive injury beyond repair, they would not engage in it. If they lose, that is the loss only of money, which is not so bad; but if they win, their character is likely so suffer. *It is bad to lose, but it is worse to win; for to win means that, ever after, they will be tempted to get gain by games of chance.* Money won by any kind of gamble is not going to be of any benefit. It will not last. Sooner or later another venture will sweep all away. We pity the poor lamb that is shorn, but the shearer is worse off or will be finally. Money should be honestly earned to do anybody any good. And it is best to come slowly, little by little, day by day, and should fairly represent the patience, honesty, and toil of the individual and not the lucky chance of an hour.

A minister wisely says: "The evils of drink are familiar to you. There are other evils. But the greatest peril is the insane spirit of gambling which seems to have taken hold of the people, irrespective of social standing or religious belief. The insane desire to get rich quickly is at the bottom of it all. There is no difference between the newsboy who flips coins and the man in Wall Street who buys stocks on margins on a chance that they will rise or fall. Both wish to get something for nothing; both are gamblers."

"From the tiny lad selling newspapers on the street to the men dwelling in a palace, the gambling spirit seems to have invaded all. Where is this thing going to end?"



#### HONEY-CANS.

We are supplying a good many 60-lb. cans, two in a case. Since our last report we have received another carload of these cans, so that we are prepared with nearly two carloads, which we are selling at prices listed in our catalog—\$7.50 for 10 boxes. Most of those handling our goods by the carload are supplied with these cans also. At the rate we have been shipping them for the past two weeks our stock will not last more than two months, and we can not guarantee these prices beyond our present supply of stock. We can not replace it from the Can Trust, and come out even, at present prices. If in need of cans, send in your orders while the supply lasts.

#### BUSHEL BOXES AND CRATES.

Because of changes in some of our manufacturing processes the slats used in our slatted and all-slatted bushel boxes are a little wider and thicker than formerly, so that we are not able to pack 18 K. D. boxes inside of two nailed up, as we have done heretofore; but we can pack 12 inside, making 14 complete boxes, with nails, in a crate of the all-slatted kind, and 12 each of the slatted or galvanized bound. We have also revised our prices on boxes to the following:

All slatted, per crate of 14, \$1.90.  
Slatted, tight ends, per crate of 12, \$1.65.  
Galvanized bound, per crate of 12, \$2.25.

This is a slight reduction on prices ruling the past two years. These prices are subject to a discount of 5 per cent in lots of 10 crates or more.

#### NO. 2 SECTIONS FOR FALL HONEY.

Those who produce amber or dark grades of comb honey should use No. 2 grade of sections in order to have the wood of the section more in harmony with its contents. In fact, the whitest grades of honey will make just as good appearance in the most of our No. 2 grade sections as they will in No. 1. Don't be afraid to try the No. 2 grade. You can save money by using them. They cost 50 cts. per 1000 less than No. 1, and, as containers of honey, are just as good. Some people have a prejudice against No. 2 sections because they think the color of the wood, being a little darker, must be nearer the heart of the tree, and therefore is more brittle or brash. This is an entirely mistaken





# To Our Shippers.



About May 1st last, we removed our business from the buildings, 120-122 W. Broadway, to larger and more commodious quarters at Nos. 265-267 Greenwich Street, and 82-84-86 Murray Street, and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises, 120-122 W. Broadway, one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "Headquarters for honey, beeswax, maple sugar, and maple syrup."

The mercantile agencies report that Joseph M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth, who has no connection with our business, a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters, Nos. 265-267 Greenwich St., and Nos. 82-84-86 Murray Street, New York.

Respectfully yours,

**HILDRETH & SEGELKEN.**